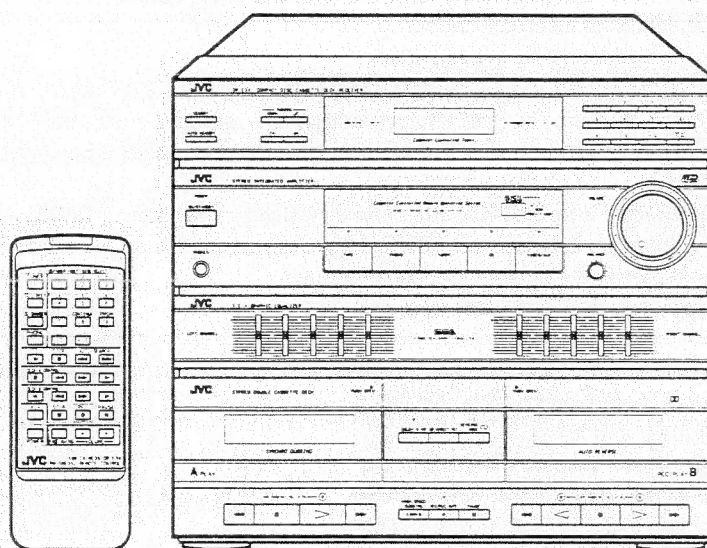


# JVC

## SERVICE MANUAL

### STEREO DOUBLE CASSETTE DECK RECEIVER

DR-E34BK  
MODEL No. DR-E34LBK



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## Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (  $\Delta$  ) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage current check (Electrical shock hazard testing)

After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

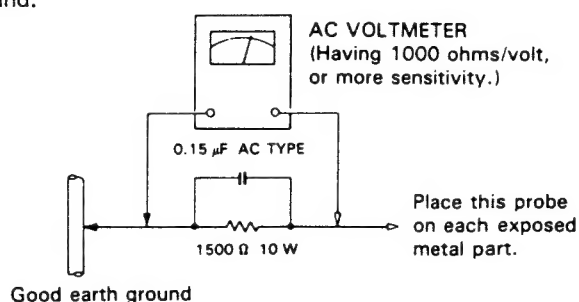
Do not use a line isolation transformer during this check.

- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
- Alternate check method

Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500  $\Omega$  10 W resistor paralleled by a 0.15  $\mu$ F AC-type capacitor between an exposed metal part and a known good earth ground.

Measure the AC voltage across the resistor with the AC voltmeter.

Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).

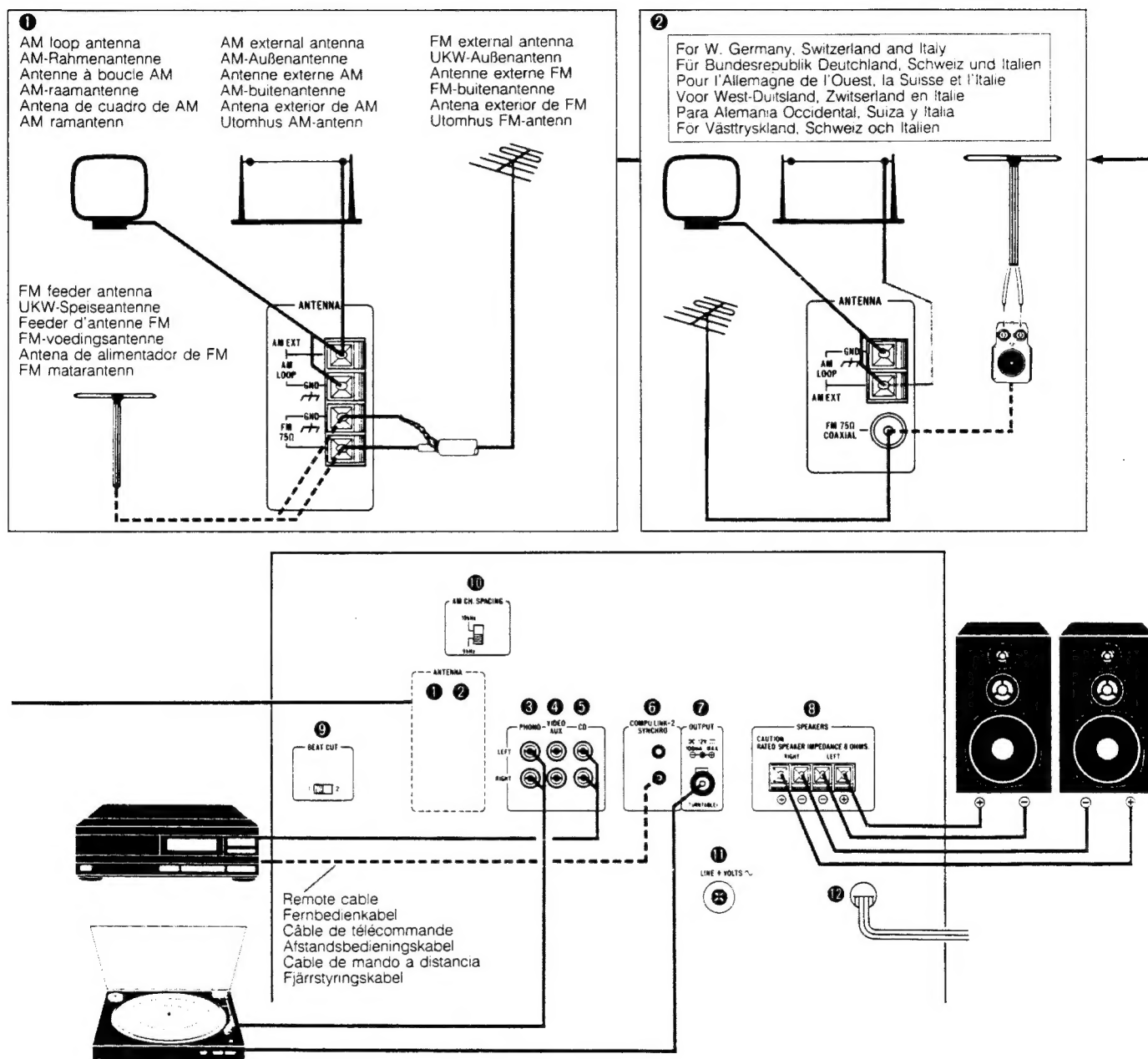


## Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

# Instruction Book

## CONNECTION DIAGRAM



- 1 External ANTENNA terminals
- 2 External ANTENNA terminals (for W. Germany, Switzerland and Italy)
- 3 PHONO terminals
- 4 VIDEO/AUX terminals
- 5 CD terminals
- 6 COMPU LINK-2/SYNCHRO terminals
- 7 DC OUTPUT terminal  
Connect the proper turntable as indicated at each terminal.
- 8 SPEAKERS terminals
- 9 BEAT CUT knob  
Normally set to "1"  
(See Fig. 10, page 5)
- 10 AM channel spacing knob\* (See \*1, page 9.)

- 11 Voltage selector\*  
When this equipment is used in an area where the supply voltage is different from the preset voltage, reset the voltage selector to the correct position.  
\* Not provided for the U.K., Australia and Continental Europe.
- 12 Power cord

### Notes:

1. Connect the speaker cords correctly; L to L and R to R.
2. Switch the power off when connecting any component.
3. Connect plugs or wires firmly. Poor contact may result in hum.
4. Use speakers with the correct impedance. The correct impedance is indicated on the rear panel.

## ANTENNAS

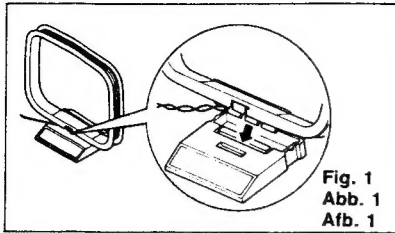


Fig. 1  
Abb. 1  
Afb. 1

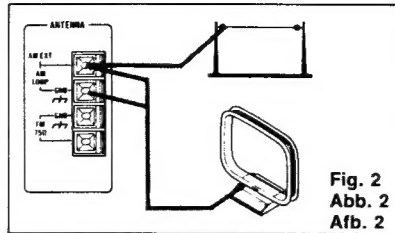


Fig. 2  
Abb. 2  
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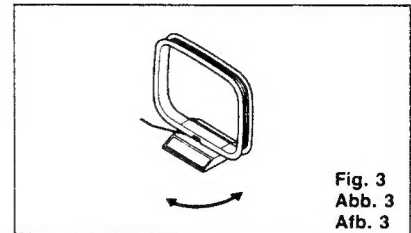


Fig. 3  
Abb. 3  
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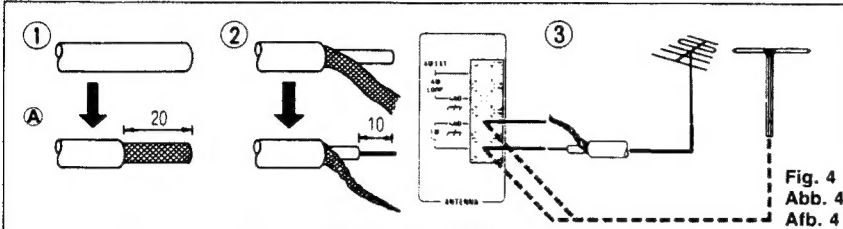


Fig. 4  
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Afb. 4

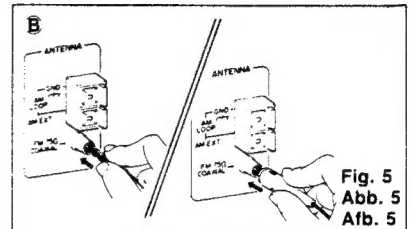
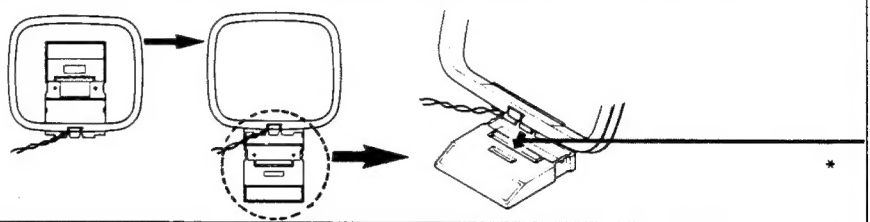


Fig. 5  
Abb. 5  
Afb. 5

How to set up the loop antenna.  
Montage der Ringantenne.  
Comment monter l'antenne-cadre.  
Installeren van de raamantenne.  
Cómo se instala la antena de cuadro.  
Så sätts ramantennen upp.



### AM Antenna

#### How to fix the loop antenna (Fig. 1)

- Install the antenna by inserting it in the direction of the arrow. (see Fig. 6)
- Place at a distance from the power-source cord, signal cord and metal fixtures on the main body, in a spot where reception is good.

#### AM (MW/LW) loop antenna (Fig. 2)

This antenna is for the reception of local AM broadcast.

#### AM (MW/LW) external antenna (Fig. 2)

If AM reception is unsatisfactory, connect an external AM antenna (single-wire antenna) to the AM antenna terminal.

#### Noise and interference (Fig. 3)

Change the direction of the loop antenna or reinstall it in a better position when reception is noisy.

#### Notes:

- If the provided loop antenna is not connected, it will be impossible to receive AM broadcasts.
- When installing an external AM antenna, leave the AM loop antenna connected.

### FM Antenna

#### How to set the FM antennas

Antenna terminals differ according to the markets.

After checking up your set, select the connection method out of A, B or C.

#### A Fig. 4

##### How to connect the coaxial

- ① Strip off the sheath to expose the braid about 20 mm (13/16").
  - ② Open the braid to expose the conductor about 10 mm (7/16").
  - ③ Plug the conductor into the FM ANTENNA terminal.
- Taper off the braid and plug it into the GND terminal.

### FM feeder antennas

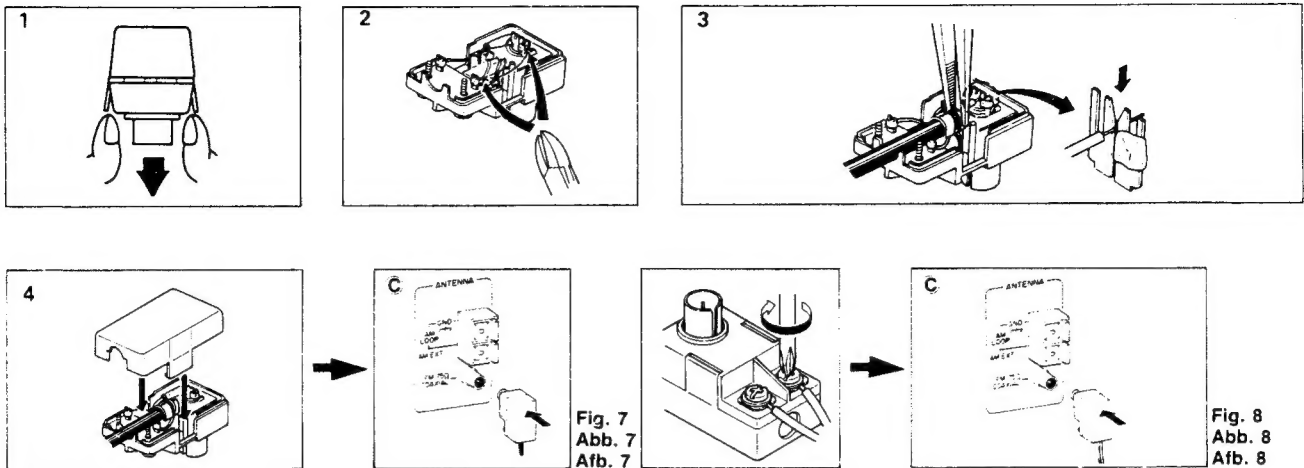
Plug into the FM antenna terminal.

#### B Fig. 5

- The FM wire antenna provided can be connected to a 75-ohm coaxial jack as a temporary measure.
- 75-ohm antenna with coaxial type connector (DIN 45 332) should be connected to the 75-ohm terminal.

\* Insert the arrow part.  
Den mit einem Pfeil bezeichneten Teil einstecken.  
Insérer la partie fléchée.  
Steek het pijl-gedeelte naar binnen.  
Inserte la parte de la flecha.  
Sätt in den pilmärkta delen.

Fig. 6  
Abb. 6  
Afb. 6



© Fig. 7, Fig. 8

• How to connect the FM connector  
In case of a 75-ohm antenna (Fig. 7)

1. Open the claws at both sides and remove the cover.
2. Cut both ends of the cord and remove it. (only when using coaxial cable)
3. Fix the coaxial cable and its core.
4. Put on the cover.

In case of a 300-ohm antenna (Fig. 8)

It is not necessary to remove the cover. If the wire inside is cut, 300 ohm antenna can not be used.

Notes:

- Choose antennas to meet the reception conditions.
- Orient and fix antennas where audio reception is the clearest.

How to connect cords (Fig. 9)

- ① Open antenna terminal levers.
- ② Plug cords into the terminals.
- ③ Close the levers.

BEAT CUT knob (Fig. 10)

When recording an AM (MW/LW) broadcast, beats may occur.  
Set the BEAT CUT knob located on the rear panel to "1" or "2" so beats will be eliminated.

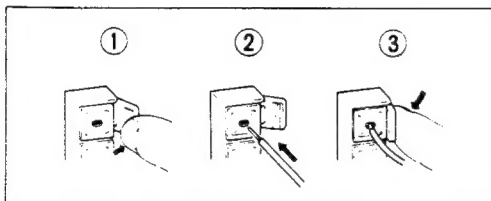


Fig. 9  
Abb. 9  
Afb. 9

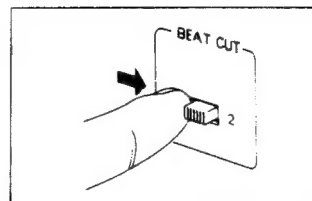
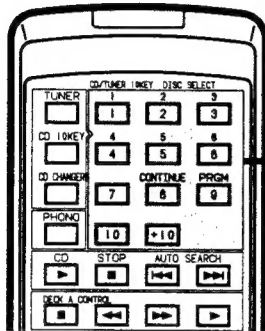
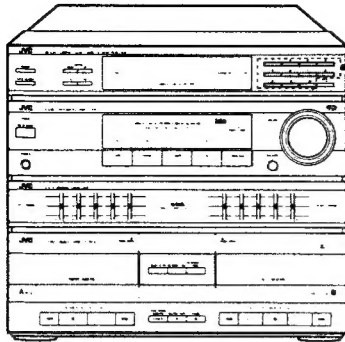


Fig. 10  
Abb. 10  
Afb. 10





#### How to use 10 KEYS

To enter 1 to 10: Simply press the appropriate numeric keys.

To enter 11 or higher numbers:  
Use the "+10" key.

#### Examples

- 15: Press "+10," then press "5."
- 20: Press "+10," then press "10."
- 25: Press "+10" twice, then press "5."
- 40: Press "+10" three times, then press "10."

#### Hoe 10 Key-toetsen gebruiken

Om 1 tot 10 in te voeren:

Druk gewoon op de gepaste cijfertoeetsen.  
Om 11 of hogere nummers in te voeren:  
Gebruik de "+10"-toets.

#### Voorbeelden

- 15: Druk op "+10" en dan op "5".
- 20: Druk op "+10" en dan op "10".
- 25: Druk tweemaal op "+10" en dan op "5".
- 40: Druk driemaal op "+10" en dan op "10".

#### Benutzung der Tasten 1 — 10

Eingabe der Zahlen von 1 bis 10 einfach durch Drücken der entsprechenden Zahlenlasten.  
Eingabe der Zahl 11 oder höherer Zahlen durch Drücken der Taste "+10".

#### Beispiele

- 15: Taste "+10" und dann Taste "5" drücken.
- 20: Taste "+10" und dann Taste "10" drücken.
- 25: Taste "+10" zweimal und dann Taste "5" drücken.
- 40: Taste "+10" dreimal und dann Taste "10" drücken.

#### Como utilizar las teclas numéricas

Para introducir un valor comprendido entre 1 y 10: Pulse simplemente las teclas numéricas oportunas.

Para introducir un valor de 11 o superior: Utilice el botón +10.

#### Ejemplos:

- 15: Pulse "+10" y, después "5".
- 20: Pulse "+10" y, después "10".
- 25: Pulse "+10" dos veces y, después "5".
- 40: Pulse "+10" tres veces y, después "10".

#### Utilisation des 10 touches

De 1 à 10: Il suffit d'appuyer sur la touche correspondante.

Au delà de 11: Appuyez sur la touche +10.

#### Exemples:

- 15: Appuyer sur "+10" puis sur "5".
- 20: Appuyer "+10" puis sur "10".
- 25: Appuyer "+10" puis "+10", puis sur "5".
- 40: Appuyer "+10", "+10", "+10" puis sur "10" etc.

#### Användning av de 10-tangent

För att ställa in 1 till 11: tryck bara på önskad tangent.

För att ställa in tal högre än 11: Använd +10.

#### Exempel

- 15: Tryck "+10" och sedan "5".
- 20: Tryck "+10" och sedan "10".
- 25: Tryck "+10" två gånger och sedan "5".
- 40: Tryck "+10" tre gånger och sedan "10".

#### How to use the remote control unit

- To use the remote, point it at the REMOTE SENSOR section on the main unit.
- The remote works up to about 7 m apart.  
(This distance may be reduced if you operate it sidelong.)

#### Hoe de afstandsbediening gebruiken

- Om de afstandsbediening te gebruiken moet u die naar de REMOTE SENSOR op het apparaat richten.
- De afstandsbediening werkt tot op een afstand van ongeveer 7 m. (Deze afstand kan kleiner worden als u het kastje vanuit een schuine positie op de sensor richt.)

#### Fernbedienung

- Die Fernbedienung auf den FERNSENSOR des CD-Spielers richten.
- Das Gerät kann bis zu einem Abstand von 7 m mit Hilfe der Fernbedienung betätigt werden.  
(Die Fernbedienung nicht schräg auf den Sensor richten. Dadurch kann die Reichweite verkürzt werden.)

#### Modo de empleo del mando a distancia

- Para usar el mando a distancia, dirijalo hacia el SENSOR DE CONTROL REMOTE de la unidad principal.
- El mando a distancia tiene un radio de acción de unos 7 metros.  
(Esta distancia puede ser menor si usted opera desde un posición lateral.)

#### Manipulation de la télécommande

- La télécommande ne peut agir que si elle est dirigée vers la partie réceptrice de l'appareil qu'elle doit commander.
- La portée de la télécommande atteint environ 7 mètres; mais cette distance devient plus courte si vous n'êtes pas bien dans l'axe.

#### Hur du använder fjärrkontrollen

- När du använder fjärrkontrollen skall du rikta denna mot huvudenhetens FJÄRRSENSOR.
- Fjärrkontrollen fungerar på upp till sju meters avstånd rakt framifrån.

#### Note:

- CD remote control operation is possible only when a JVC COMPU LINK CD player has been connected to this unit by connecting a remote cable between the SYNCHRO terminals of both units.

#### Hinweis:

- CD-Fernbedienung ist nur möglich, wenn ein JVC COMPU LINK-CD-Spieler per Fernbedienungskabel (Anschluß an die SYNCHRO-Buchsen beider Geräte) an dieses Gerät angeschlossen ist.

#### Remarques:

- Le fonctionnement de télécommande CD n'est possible seulement si un lecteur de disque audionumérique JVC COMPU LINK a été raccordé à cet appareil en branchant un câble de télécommande entre les bornes SYNCHRO des deux appareils.

#### Opmerking:

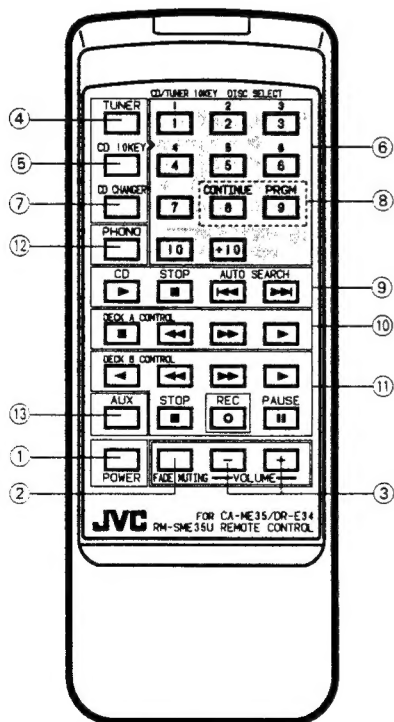
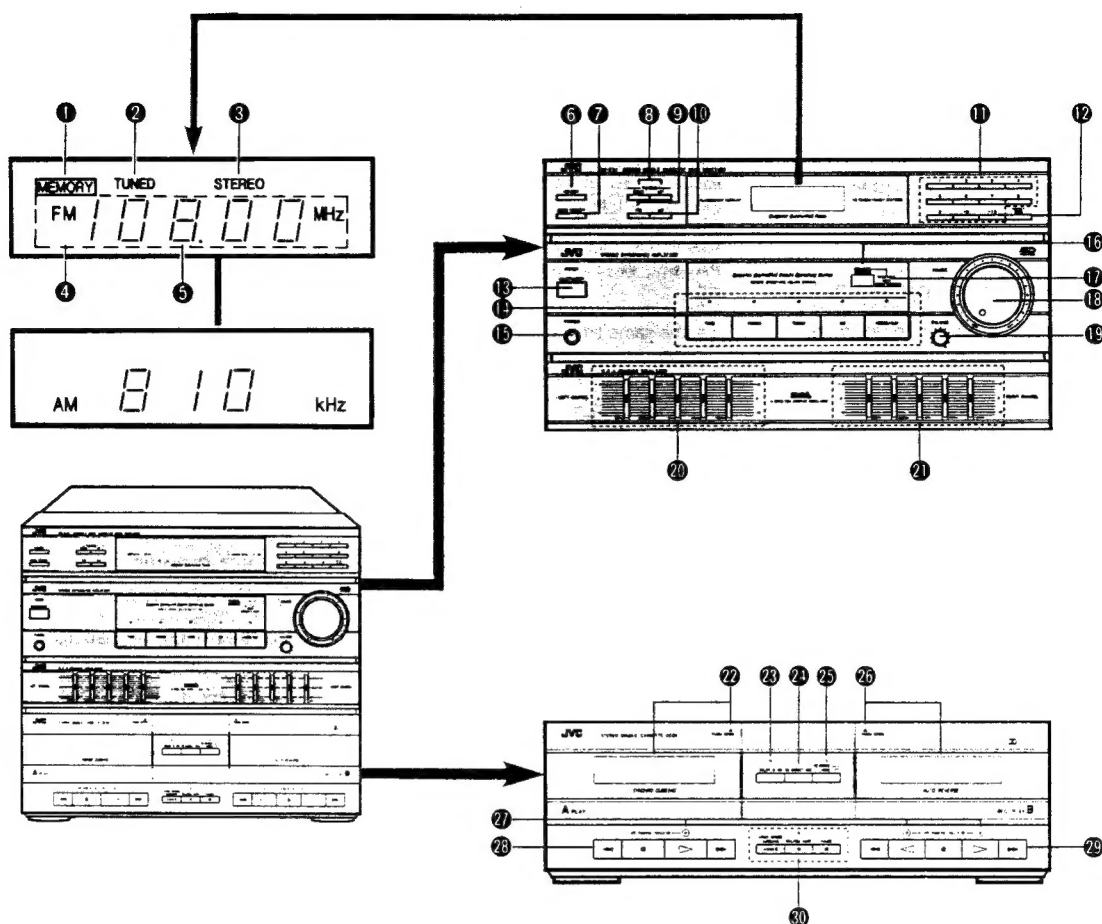
- Afstandsbediening van de compact diskspeler is enkel mogelijk wanneer een JVC compact diskspeler met het COMPU LINK systeem aangesloten is op de toestel dmv. een afstandsbedieningskabel tussen de SYNCHRO-aansluitingen van beide toestellen.

#### Nota:

- La operación de control remoto del tocadiscos compacto sólo es posible cuando se conecta un tocadiscos CD COMPU LINK de JVC a esta unidad mediante un cable de mando a distancia entre los terminales SYNCHRO de ambas unidades.

#### Anm.

- CD-spelarens fjärrstyrning blir möjlig endast efter anslutning av JVCs COMPU LINK CD-spelare till detta receiverdäck genom att ansluta fjärrstyrningskabeln mellan synkrouitagen SYNCHRO på receiverdäcket och CD-spelaren.



Use this instruction book keeping this page open.  
Die vorliegende Anleitung auf diese Seite aufschlagen und offen bereitlegen.  
Utiliser ce manuel d'utilisation en laissant cette page ouverte.  
Klap deze blz. open bij het doorlezen van de gebruiksaanwijzing.  
Utilice este manual de instrucciones, manteniendo esta página abierta.  
Använd denna bruksanvisning och håll sidan uppslagen.

## OPERATION WITH THE REMOTE CONTROL UNIT

### How to use CD/TUNER 10 KEYS

#### TUNER 10 KEYS

1. Press TUNER button ④.
2. Press 10 KEYS.
  - If you have preset a station, you can tune it in instantly by pressing the preset channel number. (Presets are performed on the main unit. See page 10.)

#### CD 10 KEYS

1. Press CD 10 KEY button ⑤.
2. Press 10 KEYS.
  - The 10 KEYS will work as CD 10 KEYS, giving you random access to your favorites on a CD. Also used to vary the length of tape during edit recording.

#### How to use CD changer

- Use this when operating CD auto changer.
1. Press the CD changer BUTTON ⑦.
  2. Select CONTINUE [8] or PRGM [9] button and press it.
  3. Using DISC SELECT ([1] - [6]) button, specify the disc number.

#### Note:

- When specifying a song number, use AUTO SEARCH ([<<] or [>>]) button, or CD 10 KEYS.
- Also read carefully the instruction manual of the CD auto changer.

### Instructions for Use

#### ① POWER

- Turn ON the power to the main unit or let it stand by.

#### ② FADE MUTING

- Spin the VOLUME dial for a lower sound volume, depending on how many times you press this button.

#### ③ VOLUME

- [+]: Press to increase the sound volume.
- [-]: Press to reduce the sound volume.

#### ④ TUNER

- Press to tune into broadcasts by using the 10 KEYS as TUNER 10 KEYS.

#### ⑤ CD 10 KEY

- Press to use the 10 KEYS as CD 10 KEYS.

#### ⑥ CD/TUNER 10 KEYS ([1] - [10], [+10])

- The 10 KEYS can be used as TUNER or CD 10 KEYS.

#### DISC SELECT ([1] - [6]) (CD auto changer only)

- Press it when specifying a disc number of CD auto changer.

#### ⑦ CD CHANGER (CD auto changer only)

- To operate CD auto changer, press this button first.

#### ⑧ CONTINUE [8] (CD auto changer only)

- Press to play CD continuously.
- PRGM [9] (CD auto changer only)
- Plays CD in programmed order.

#### ⑨ CD controls

- CD [▶]: Starts playing a disc.
- STOP [■]: Stops playing a disc.
- AUTO SEARCH [◀◀]: Scans a disc backward.
- AUTO SEARCH [▶▶]: Scans a disc forward.
- Disc are scanned continuously while these buttons are pressed continuously.

#### ⑩ DECK A CONTROL

- [▶]: Plays tape.
- [■]: Stop tape.
- [◀◀]: Fast-winds a tape to the left.
- [▶▶]: Fast-winds a tape to the right.

#### ⑪ DECK B CONTROL

- [▶]: Plays the front side of a tape.
- [◀]: Plays the reverse side of a tape.
- REC [○]: To start tape recording, press the [◀] or [▶] button while holding down this button.
- Muting is operable from the main unit.
- PAUSE [||]: Pause playback or recording.
- Press this button and the REC [○] button at the same time to enter the REC PAUSE mode.
- To resume playback or recording, press the [▶] or [◀] button.
- The [◀◀], [▶▶], and [■] buttons operate the same as those in DECK A CONTROL.

### Source selector controls

#### ⑫ PHONO

- Press to listen to a record.

#### ⑬ AUX

- Press to listen to the sound from the source plugged into the VIDEO/AUX jack.

## DESCRIPTION AND FUNCTIONS

### Tuner section

#### ① MEMORY indicator

#### ② TUNED indicator

#### ③ STEREO indicator

#### ④ FM/AM indicator

- "FM" or "AM" lights as an FM or AM broadcast is being received.

#### ⑤ Frequency/channel indicator

- This indicator normally shows a frequency. It displays a channel number when PRESET SCAN button is pressed. When a 10 KEY (preset stations) is pressed, it displays a channel number for about 2 seconds and returns to a frequency display.

#### ⑥ MEMORY

#### ⑦ AUTO MEMORY

#### ⑧ TUNING (UP/DOWN)

- Use to tune in an FM or AM broadcast.

(See \*2, page 9.)

- UP: Use to increment the tuned-in frequency.
- DOWN: Use to decrement the tuned-in frequency.

#### ⑨ FM

#### ⑩ AM (DR-E34BK) AM (MW/LW) (DR-E34LBK)

#### ⑪ 10 KEYS (Preset stations)

- See "How to use 10 KEYS," page 6.

#### ⑫ PRESET SCAN

### Amplifier section

#### ⑬ POWER (ON/STANDBY)

- Turns the power ON or activates the STANDBY mode.

#### STANDBY mode:

- Preset data is retained in memory while the power cord is plugged into an AC outlet. If a power failure occurs or the cord is unplugged, data is retained for one or two days before memory is cleared.

#### Note:

- A small amount of power (9 watts) is consumed in the STANDBY mode. To switch the power off completely, unplug the power cord.

#### ⑭ Source selectors and indicators TAPE, PHONO, TUNER, CD, and VIDEO/AUX

#### ⑮ PHONES jack

- Plug headphones into this jack.

#### Note:

- Plugging in headphones switches off the sound from the speakers.

#### ⑯ REMOTE SENSOR

- This sensor detects the signals transmitted from the remote control unit.

#### ⑰ RECEIVED indicator

- Lights when this unit receives signals transmitted from the remote control unit.

#### POWER STANDBY indicator

- Lights when POWER is STANDBY MODE.

#### ⑱ VOLUME

#### ⑲ BALANCE

- Balances the sound volumes of the left and right speakers. Normally, leave this knob at the center (click) position.

### S.E.A. GRAPHIC EQUALIZER Section

#### ⑳ LEFT CHANNEL

#### ㉑ RIGHT CHANNEL

### Cassette Deck section

#### ㉒ PUSH OPEN and Cassette holder (Deck A)

#### ㉓ DOLBY B NR and indicator (See \*3, page 9.)

#### ㉔ CD DIRECT REC

- Press this button to directly record a compact disc on tape deck B.

#### ㉕ REVERSE MODE [◀] button and indicator

#### ㉖ PUSH OPEN and cassette holder (Deck B)

#### ㉗ TAPE RUNNING INDICATORS

- Show the status of tape running.

#### ㉘ Deck A operation buttons (PLAY)

- [◀◀]: Fast-winds tape to the left.
- [▶▶]: Fast-winds tape to the right.
- [▶]: Plays tape.
- [■]: Stop tape.

#### ㉙ Deck B operation buttons (REC/PLAY)

- [▶]: Plays the front side of tape.
- [◀]: Plays the reverse side of tape.
- The [◀◀], [▶▶], and [■] buttons operate the same as those in deck A.

#### ㉚ HIGH SPEED DUBBING (A ▶▶ B) REC/REC MUTE (○) and indicator (deck B only)

- The indicator lights while recording is in progress and flashes while it is muted.

#### PAUSE (||) (deck B only)

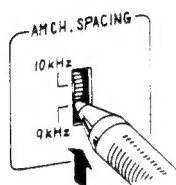
- Pauses playback or recording.



## \*1 Channel spacing

Area	Band	FM	AM (MW)	AM (LW)
Europe, U.K.		50 kHz	9 kHz	1 kHz
Australia		50 kHz	9 kHz	—
Other area		50 kHz	9 kHz or 10 kHz	—

An AM channel spacing switch is provided on the rear panel for selecting 9 kHz or 10 kHz steps according to your area (not provided on tuners for the U.K., Australia and Continental Europe).



Example  
Beispiel  
Exemple  
Voorbeeld  
Ejemplo  
Exempel

**Fig. 12**  
**Abb. 12**  
**Afb. 12**


To change the AM channel spacing:  
First, turn the power on, press the FM button to set to the FM mode, then disconnect the power cord. Wait for a few seconds and switch over the AM channel spacing switch as shown in Fig. 12, using the tip of a ball-point pen.

## \*2 Pressing the TUNING (UP/DOWN) buttons will sample stations up or down a selected band in the following frequency steps.

	FM	AM/MW	AM/LW
DR-E34BK	50 kHz	9 kHz or 10 kHz	—
DR-E34LBK	50 kHz	9 kHz	1 kHz

- Your receiver allow selection between the MW and LW bands while tuning in.
- If you receiver reaches the upper- or lower-limit while scanning with the UP or DOWN button, it reverts to the lower- or upper-limit frequency automatically and continue with scanning further.

## \*3 Turn the DOLBY B NR-button ON to record with a Dolby system on or to play back a tape recorded on a Dolby system.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.  
"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

## BASIC OPERATIONS

## 1. Turn the power on.

ON: Press the POWER button to turn the power ON.

## Note:

- Turn volume to "MIN" before turning power ON.

STAND BY: Press the POWER button again to turn the power STAND BY mode. (The indicator lights.)

## 2. Select a source.

Press a source selector button of your choosing, making sure its indicator lights.

- To listen to broadcasts:  
Press the TUNER button (see page 10).
- To listen to discs:  
Press the CD button
- To listen to tapes:  
Press the TAPE button (see page 11).
- To listen to records:  
Press the PHONO button (see page 14).
- Press the VIDEO/AUX button to listen to the sound from the source plugged into the VIDEO/AUX jack (see page 14).  
Operate each component to start playback or recording.

## Notes:

- When listening to tapes or CD by the COMPU LINK system, simply press the associated PLAY (▶) or (◀) button and source will be switched to TAPE or CD automatically.  
While presetting the FM/AM button, simply press the preset stations button and source will be switched to TUNER.
- After switching is made, previously played TAPE or CD will automatically stop.
- When connecting a CD player with the COMPU LINK SYSTEM, only JVC equipment associated with this system can be operated. (How to connect, see page 3)

## 3. Adjust the sound volume.

Turn the VOLUME control to the MAX side (clockwise) to increase the sound volume, to the MIN side (counterclockwise) to reduce it.

## 4. Adjust the tone to your liking.

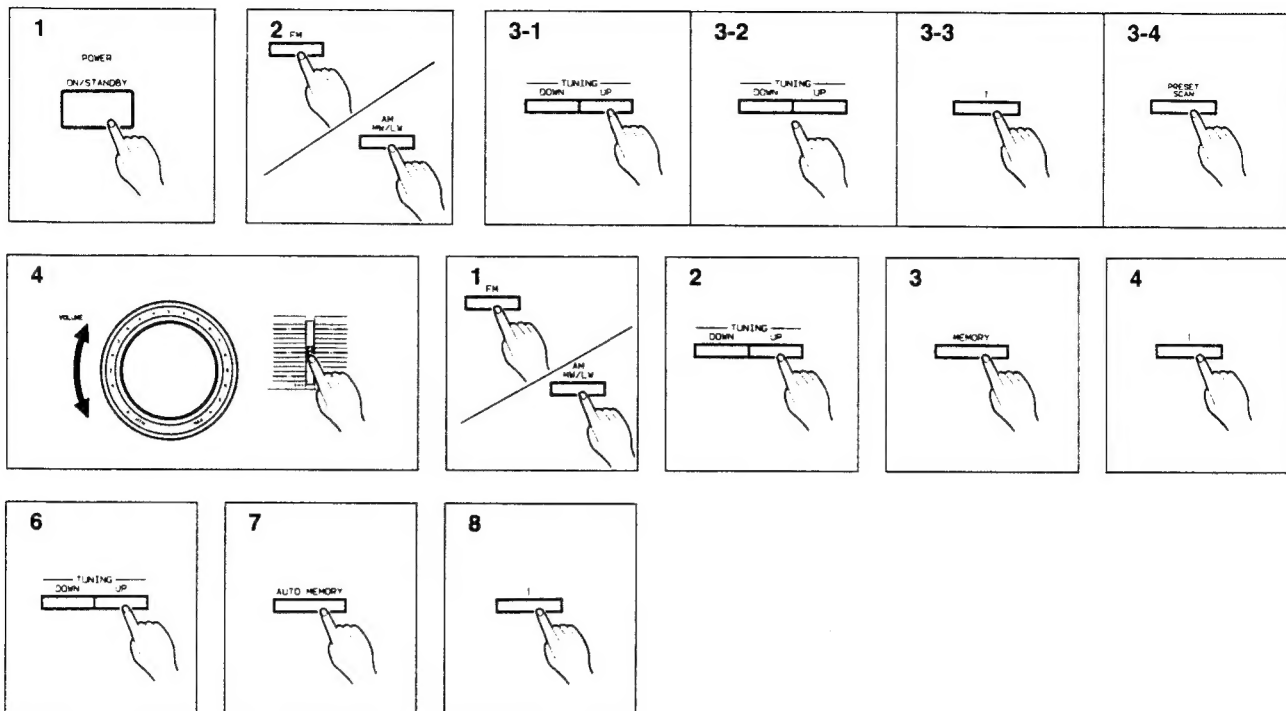
Vertical motion of this S.E.A. GRAPHIC EQUALIZER Control allows you to select five levels of sound quality, from deep base (63 Hz) to treble (16 kHz).

Frequency band	Feature
63 Hz (Deep bass)	Firm, stable tone
250 Hz (Bass)	Powerful, crisp tone
1 kHz (Mean)	Tone full of presence, with sharp vocal sound
4 kHz (Mean treble)	Clear, bright tone
16 kHz (Treble)	Expansive, delicate tone

- The S.E.A. GRAPHIC EQUALIZER control at the "0" position delivers a flat sound.
- Move the control up to enhance tonal effects, down to lessen them.
- Adjust the sound quality for the left and right speakers independently.

## OPERATIONS

### LISTENING TO BROADCASTS



1. Press the POWER button to turn the power ON.
2. Press the FM or AM button.
3. Tune in a station.  
The TUNED indicator will light when your receiver has located broadcast correctly. The STEREO indicator lights to indicate the reception of stereo sound while tuning in an FM broadcast.
- 3-1. Manual tuning  
Hold the TUNING (UP or DOWN) button pressed to sample frequencies continuously, or press once to seek frequencies in predetermined steps. (See \*2, page 9.)
- 3-2. Auto-tuning  
Press the TUNING (UP or DOWN) button for longer than 1 second and release, and the receiver will start scanning and halt on reception of a broadcast.
- 3-3. Preset tuning  
Press the preset stations buttons to tune in preset stations. The frequency/channel indicator will revert to the frequency display after displaying a preset channel number for about 2 seconds.
- 3-4. Preset Scan Tuning  
The PRESET SCAN button samples preset stations each for 4 seconds.  
When the desired station is located, press the PRESET SCAN button again while the channel number is flashing.
4. Adjust the sound volume and tone to your taste.

#### To preset stations

1. Press the FM or AM button.
2. Tune in a station with the TUNING (UP or DOWN) button.
3. Press the MEMORY button making sure the MEMORY indicator lights.
4. While the MEMORY indicator is on (for about 5 seconds), press the preset stations button in which you want the station programmed.
5. Repeat Step 1 — 4 above.  
You can program a total of up to 40 FM and AM stations.

#### Note:

- You cannot program stations while the MEMORY indicator is off. When the MEMORY indicator is off, press the MEMORY button again.

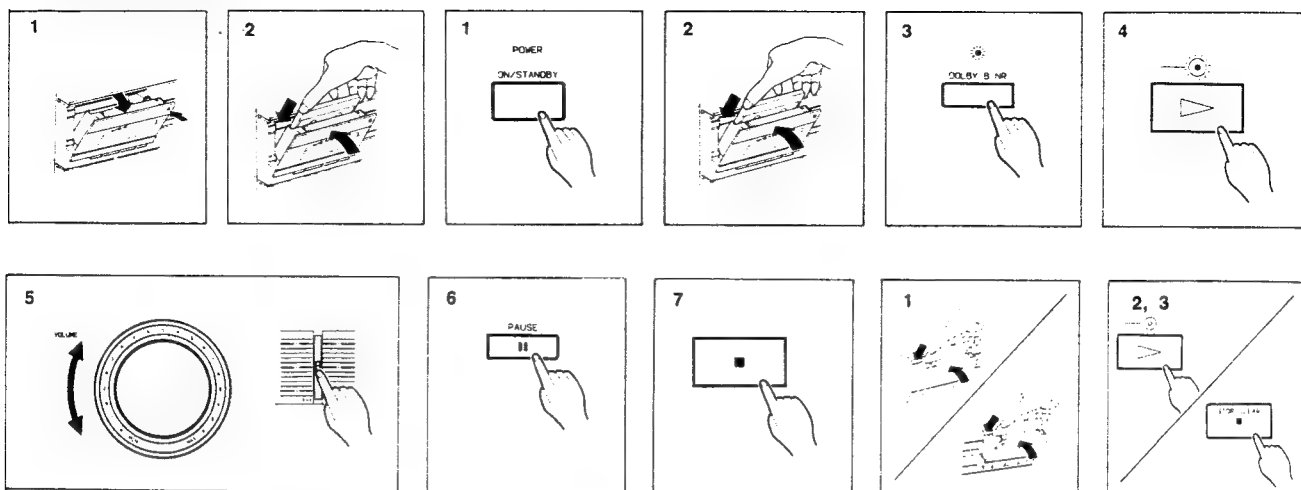
#### Auto memory programming

6. Select the lowest frequency of FM or AM available, or any frequency lower than the frequency you want programmed in memory.
7. Press the AUTO MEMORY button.
  - A channel number will flash for about 5 seconds.
8. While the channel number is flashing, press a desired preset stations button.
  - The selected station is automatically programmed in the preset stations button just pressed.
  - To bypass a station, press the AUTO MEMORY button again while the channel number is flashing and that station will be skipped from being programmed.
  - The search ends when auto memory programming is complete.

#### Notes:

- If a new station is programmed in a preset stations button in which another has already been programmed, it will override the existing station preset.
- Station presets could be cancelled if the power plug is disconnected from the outlet or power is interrupted. In this case, preset the stations again.
- When you want to stop auto memory, press TUNING (up or down) button.

## LISTENING TO TAPES, RECORDING, DUBBING



- Your receiver is designed to accept normal and chrome tapes only. (The type of tape you use is automatically detected by the auto-tape selection feature.)
- Recording can be made only with deck B, but playing is available with both decks A and B.

### To load tapes

1. Press the PUSH OPEN ( ) to open the cassette holder.
2. Load a tape and close the cassette holder. Set with the tape facing downward.
  - When the tape has finished playing, press the PUSH OPEN ( ) to unload the tape.

### LISTENING TO TAPES

1. Press the POWER button to turn the power ON.
2. Load a tape.
3. When listening to a tape that has been recorded on a Dolby system, set the DOLBY B NR button ON, making sure its indicator lights. (See \*3, page 23.)
4. Press the ( ) or ( ) button.
  - The source will be switched to TAPE automatically.
5. Adjust the sound volume and tone to your taste.

### To pause (Deck B only)

6. Press the PAUSE ( ) button.
  - To resume the play, press either the ( ) or ( ) button.

### To stop

7. Press the ( ) button.
  - Auto reverse feature (deck B only)
    - Press the REVERSE MODE ( ) button to turn its indicator on or off.
    - On: The tape deck repeatedly plays both sides of a tape.
    - Off: The tape deck plays one side of a tape and stops.
    - Each time you press the button, the indicator toggles between on and off states.

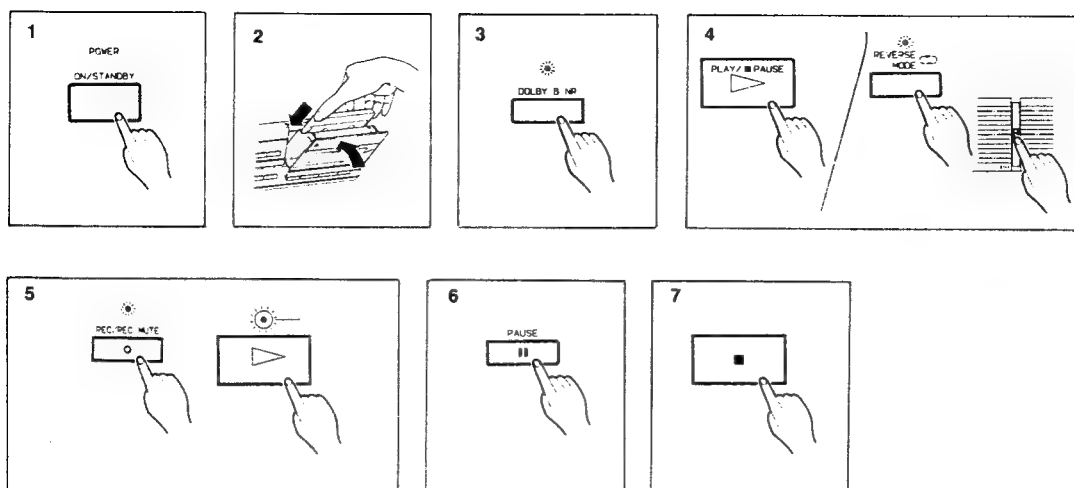
### Continuous playing

- Your receiver is equipped with the continuous playing mode.
1. Load a tape to deck A and deck B.
  2. Press the ( ) or ( ) button.
    - When one side of the deck finished playing, the other side automatically starts playing and repeatedly plays both deck A and B.
    - When the tape finishes playing, it automatically re-wound.
    - Press the REVERSE MODE button to play both sides of deck B, then play deck A.
  3. Press the ( ) button to stop.

### Notes:

- When loading the tape to both deck A and B, the deck automatically plays in continuous playing mode.
- Before turning the power OFF, be sure to release the cassette deck's playback or recording mode.

## RECORDING (Deck B only)



- The built-in auto level control circuit in the receiver saves you the trouble of adjusting the recording level.
- Spins of the VOLUME and BALANCE control during recording will have no effects up on recording (including dubbing).
- Set the SEA knob to FLAT when not SEA recording.

1. Press the POWER button to turn the power ON.
2. Load a tape on deck B.
3. To record the tape with a Dolby system on, set the DOLBY B NR button ON, making sure its indicator lights. (See \*3, page 9.)
4. Play back the source to record. (PHONO, TUNER, CD, VIDEO/AUX)
  - Press the REVERSE MODE button to turn its indicator on or off.
    - On: Reciprocal recording from side A to side B.
    - Off: One-sided recording.
  - Set the SEA knob to any position for SEA recording.
5. Press the (▷) or (◁) button while holding down the REC/REC MUTE (○) button, or press the REC/REC MUTE button and the MUTE (○) at the same time to set the deck in PAUSE mode, and press the (▷) or (◁) button to start recording.

### To pause recording

6. Press the PAUSE (||) button.
  - To resume recording, press the (▷) or (◁) button.

### To stop recording

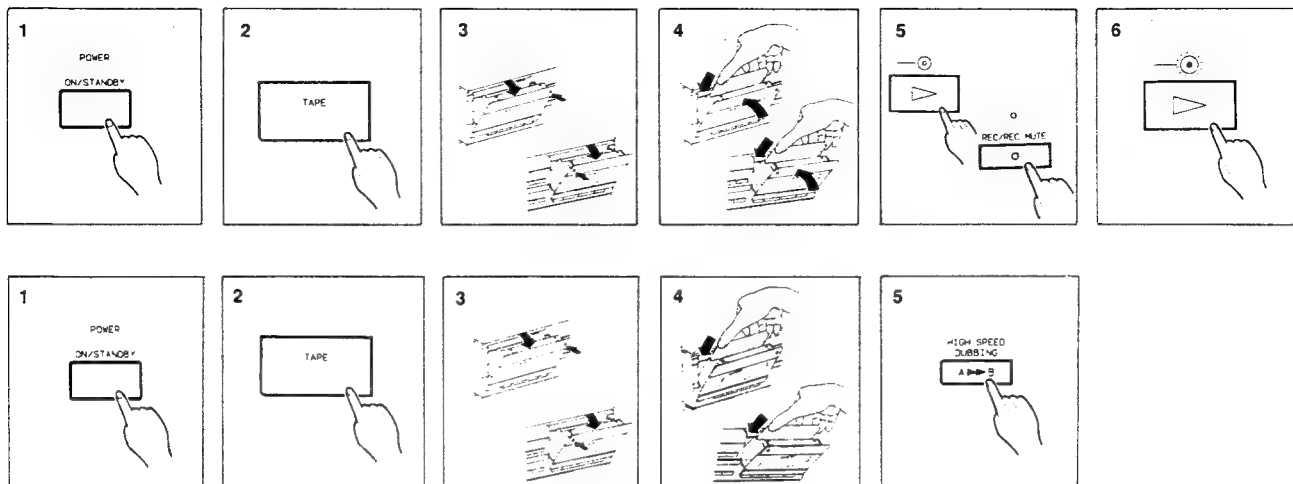
7. Press the (■) button.

### About S.E.A. recording

You can create a custom sound tape with sound quality varied to your liking by controlling the S.E.A. graphic equalizer during recording.

- S.E.A. recording does not work on dubbing.
- If you wish the S.E.A. effect for recording operations other than dubbing, complete the S.E.A. procedures before the recording operation.

# DUBBING (from deck A to deck B)



## Normal dubbing

1. Turn the POWER switch ON.
2. Press the TAPE button.
3. Press PUSH OPEN (▲) on decks A and B to open their cassette holders.
4. Load a play tape in deck A and a recording tape in deck B.
5. Set deck B in record mode. (Press the (▷) button while holding down the REC/REC MUTE (○) button.)
6. Set deck A in play mode. (Press the (▷) button.)

## High-speed dubbing

1. Turn the POWER switch ON.
2. Press the TAPE button.
3. Press PUSH OPEN (▲) on decks A and B to open their cassette holders.
4. Load a play tape in deck A and a recording tape in deck B.
5. Press the HIGH SPEED DUBBING (A▶▶B) button.

## To stop dubbing

Normal dubbing: Press the (■) buttons on decks A and B.

High-speed dubbing: Press the (■) button on deck B.

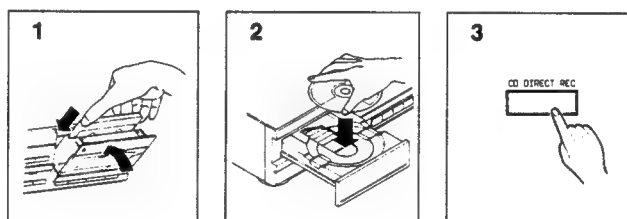
## Notes:

- Before dubbing is made, check the running direction of deck B by the TAPE RUNNING INDICATOR. To change (◁) to (▷), while holding down (■) button, press (▷) button.
- With the Dolby system on, tapes are recorded in the same Dolby mode as the prerecorded tape had been recorded, regardless of whether the DOLBY B NR button is ON or OFF. (The DOLBY B NR indicator is off while dubbing is in progress.)
- In high-speed dubbing, tape recording is independent of the source selector position, as well as the sound volume and tone settings, so you can listen to a source other than TAPE while dubbing. (If a source selector button other than TAPE is pressed during normal-speed dubbing, that source will be recorded.)
- S.E.A. recording is not possible during normal or high speed dubbing.

## Notes for dubbing:

- As the tape length for recording may not be enough due to differences in tapes speed between deck A and deck B and variations in tape length etc., use a tape with enough length for recording.
- Certain televisions may be affected by this unit during high-speed dubbing. If this happens, turn the power of the TV off or move this unit away from the TV.

When recording a tune (TAPE) while monitoring it, use normal dubbing. When listening to a source other than the tape being recorded, high-speed dubbing is convenient.



## CD direct recording (deck B only)

- By using remote cable, connect JVC CD player or CD auto changer with the COMPU LINK terminal of this equipment.
- You can easily record a disc onto a tape synchronized with it.

## Basic Operations

1. Load a tape in deck B.
  - To record on both sides of the tape, press the REVERSE MODE (↺) button to turn its indicator on.
2. Mount a disc on the CD player.
3. Press the CD DIRECT REC button.

## Note:

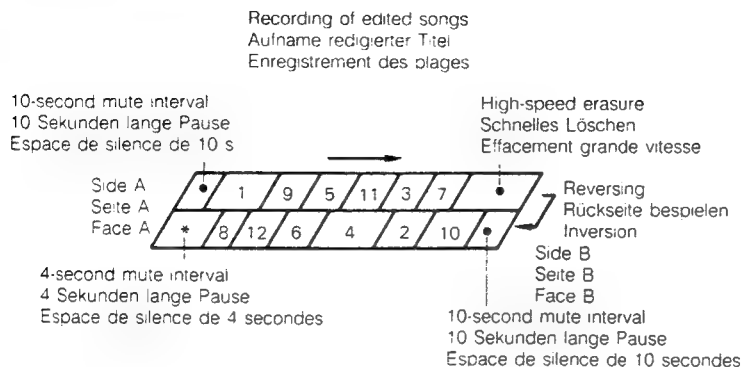
- The source is automatically fixed at CD during direct recording. To switch to another source, press the STOP (■) button on deck B or the CD player.

**When CD DIRECT RECORDING is used for edit recording,**

- The CD DIRECT REC button starts edit recording automatically in the following manners:

Example:

Side A, 1, 9, 5, ...; side B, 10, 2, 4, ...



- After programming sides A and B, press the CD DIRECT REC button to start edit recording automatically.
- Even when the end of the tape is not reached, the tape is fast-forwarded to the beginning of side B and a 4-second mute interval is created to prevent the beginning of the next song from being cut out.
- When the programmed recording sequence is complete, the tape stops after a 4-second mute interval.

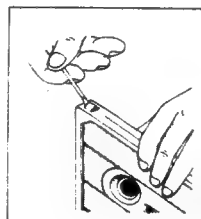


Fig. 16  
Abb. 16  
Afb. 16

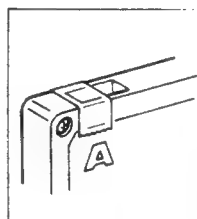


Fig. 17  
Abb. 17  
Afb. 17

#### REC MUTE (deck B only)

- To create a 4-second mute interval during recording.
- 1. To create a mute interval during recording, touch the REC/REC MUTE button.
  - About 4-second mute interval is automatically created and sets in REC MUTE mode.
- 2. To resume recording, press the ( > ) or ( < ) button.

#### Note:

- When you want to create a mute interval of over 4-second, hold down the REC/REC MUTE button desired time. Releasing this button sets in REC PAUSE mode.

#### ERASING

Recording on a cassette automatically erases the previous sound.

To erase without making a new recording, set the source selector to the TAPE position. Then, set deck B in the recording mode.

#### Note:

- **Cassette tapes have safety lugs. Valuable recordings can be protected from accidental erasure by cutting these lugs. To protect side A from erasure, for example, cut the lug on the left when viewed from side A; to protect side B from erasure, cut the lug on the left when viewed from side B (Fig. 16).**

To record on tapes with their lugs having been cut, cover the voids with an adhesive tape or the like and you can record on them over again (Fig. 17).

## CASSETTE TAPE

#### LISTENING TO RECORDS

1. Press the POWER button to turn the power ON.
2. Press the PHONO button.
3. Play a record.
  - Refer to the instructions manual pertaining to the record player.
4. Adjust the sound volume and tone to your taste.

**Listen to the source of the component plugged into the VIDEO/AUX jack.**

5. Press the VIDEO/AUX button.
  - Read the instruction manual for the component plugged in.

#### • Tape type

The following two types of tape can be used for this unit.

- NORMAL (TYPE I)
- CHROME (TYPE II)

#### Note:

- Using a Metal (TYPE IV) or Ferri-chrome tape is not recommended because this unit does not have the required characteristics.



## MAINTENANCE

### Head cleaning

Head cleaning is required to assure optimum performance. The heads which come into contact with the tape attract minute particles of dust and become dirty.

If the heads are dirty .....

- Sound quality becomes poor.
- The sound level drops.
- Recording becomes impossible.
- Sound is interrupted.
- Previous recordings are not erased.

Because of this, keep the heads clean.

Wipe the heads with a cleaning stick or cloth moistened with alcohol (not too much).

### Notes:

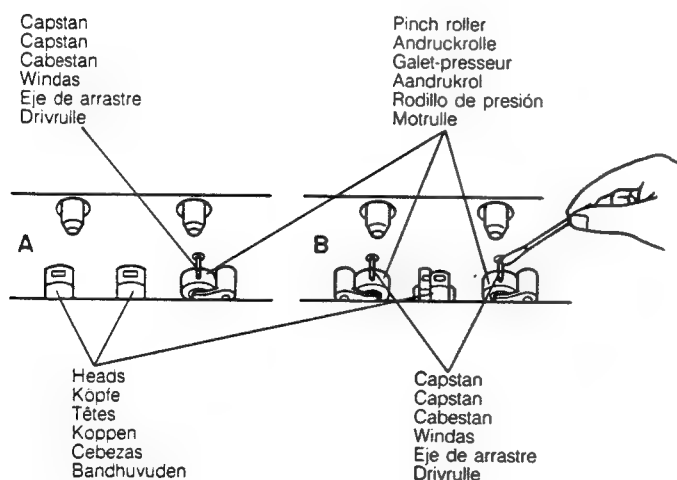
- Do not bring any iron object, magnet screwdriver, etc. close to the heads.
- Do not use force so the right head positions are kept.
- Make sure to turn the power off when cleaning.

### Cleaning the pinch roller and capstan

Wipe the pinch roller and capstan referring to "Head cleaning".

### Demagnetizing

If the heads become magnetized, noise will occur and high frequency response will deteriorate. In this case, set the POWER button to OFF and demagnetize the heads with a head demagnetizer. For more details, refer to the instruction book of the demagnetizer.



## SPECIFICATIONS

### AMPLIFIER SECTION

Output power: (DIN)

30 watts per channel min. RMS, both channels driven, into 8 ohms at 1 kHz with no more than 0.9% total harmonic distortion.

MUSIC DIN : 55 W + 55 W

Input sensitivity/impedance

PHONO : 3 mV/50 kohms

CD : 500 mV/50 kohms

VIDEO/AUX : 300 mV/50 kohms

S.E.A. graphic equalizer

Center frequencies : 63 Hz, 250 Hz, 1 kHz, 4 kHz, 16 kHz

Control range : +10 dB  $\pm$  1 dB, -10 dB  $\pm$  1 dB

### FM TUNER SECTION

Tuning range : 87.5 MHz —

108.0 MHz

Usable sensitivity : 0.95  $\mu$ V/75 ohms (IHF)

26 dB Quieting

sensitivity : 1.5  $\mu$ V/75 ohms (DIN)

Signal to noise ratio : Mono 80 dB (IHF

A-net)

Stereo 73 dB (IHF

A-net)

Mono 72 dB (DIN)

Stereo 64 dB (DIN)

### AM TUNER SECTION

MW

Tuning range

Channel space : 522 kHz — 1629 kHz

9 kHz (for UK, Australia, Continental Europe)

531 kHz — 1602 kHz

(for other area)

Channel space : 530 kHz — 1600 kHz

10 kHz (for other area)

Sensitivity : 300  $\mu$ V/m (at 1000 kHz or 999 kHz)

### LW (DR-E34LBK only)

Tuning range : 144 kHz — 353 kHz

144 kHz — 290 kHz

(for Italy only)

Sensitivity : 600  $\mu$ V/m (at 245 kHz)

### CASSETTE SECTION

Head Deck A : Metaform (play)

Deck B : Metaform (play/rec)

Ferrite (erase)

Frequency response : Normal tape:

30 Hz — 16 kHz

(-20 dB rec/play)

Chrome tape

30 Hz — 17 kHz

(-20 dB rec/play)

Wow and flutter : 0.08% (WRMS),

0.2% (DIN)

Signal to noise ratio : 57 dB (chrome tape)

### GENERAL

Dimensions : 360(W) x 310(H) x

306(D) mm

(14-3/16" x 12-1/4" x

12-1/16")

Weight : 7.2 kg (15.9 lbs)

Design and specifications subject to change without notice.

### POWER SPECIFICATIONS

Area	Line Voltage & Frequency	Power Consumption
UK	AC 240 V $\sim$ , 50 Hz	210 watts
Australia		
Continental Europe	AC 220 V $\sim$ , 50 Hz	105 watts
Other areas	AC 110 / 127 / 220 / 240 V $\sim$ selectable, 50/60 Hz	

## Disassembly Procedures

### (1) Removing the top cover

1. Remove the screws on both sides of the cassette receiver.
2. Remove the four screws on the back, then lift up the back of the top cover.

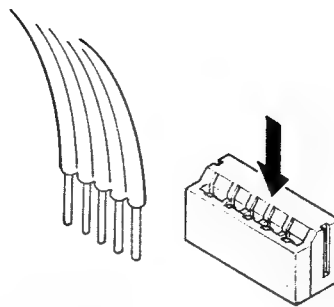


Fig. 1

### (2) Removing the front panel

1. Remove two screws fastening the side of the front panel assembly, and five black screws fastening the bottom.
2. Disconnect the connectors.

Main

P.C.Board(\*J021,\*J261,\*J251,\*J041,P201,  
P202,JB301)

TUNER P.C. Board (J101),( J105 only A,U)

**\*Notes :** When removing the flat wire from the connector, press the connector lock as shown in. (Fig 1)

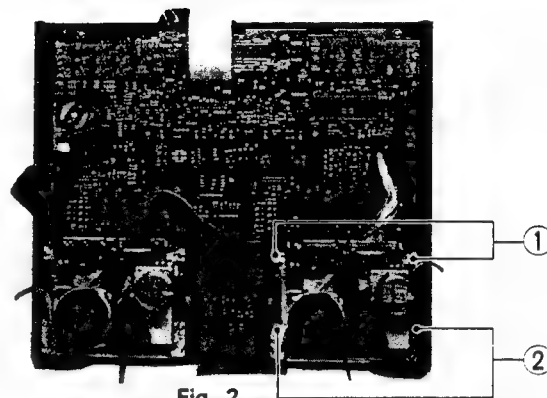


Fig. 2

### (3) Removing the cassette mechanism

1. Remove the screws ① and the screws ②. Screws ① are the double line screws for plastic screws. Screws ② are the tapping screws for chassis.(Fig 2)
2. Open the cassette door and remove the mechanism

### (4) Removing the cassette door

1. Remove the cassette mechanism.
2. Disconnect the cassette spring from the Holder bracket.
3. Remove the screws ③ folding the damper units and then remove the damper units.
4. Remove the screws ④ and then remove the Holder Bracket.(Fig 3)

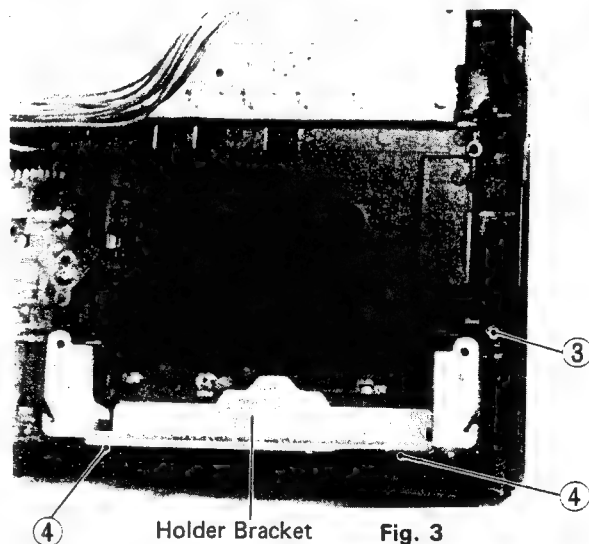


Fig. 3

### (5) Removing the cassette switch P.C. Board

1. Remove the cassette doors.
2. Remove the six screws holding the cassette switch P.C. Board.
3. Remove the cassette switch P.C. Board.

### (6) Removing the Front P.C. Board

1. Remove the balance volume knob and the master volume.
2. Remove the flat wire FW451.
3. Remove the fourteen screws ⑤. (Fig 4)
4. Remove the Front P.C. Board.

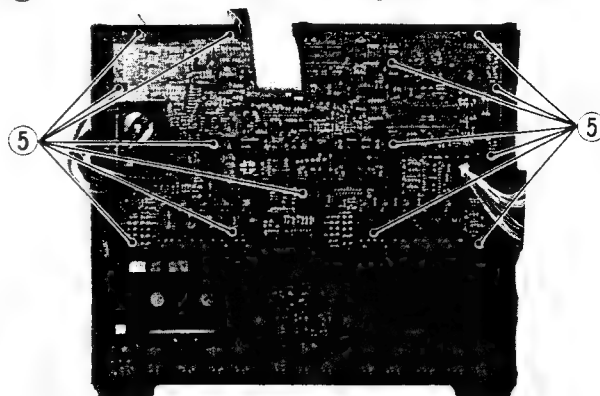
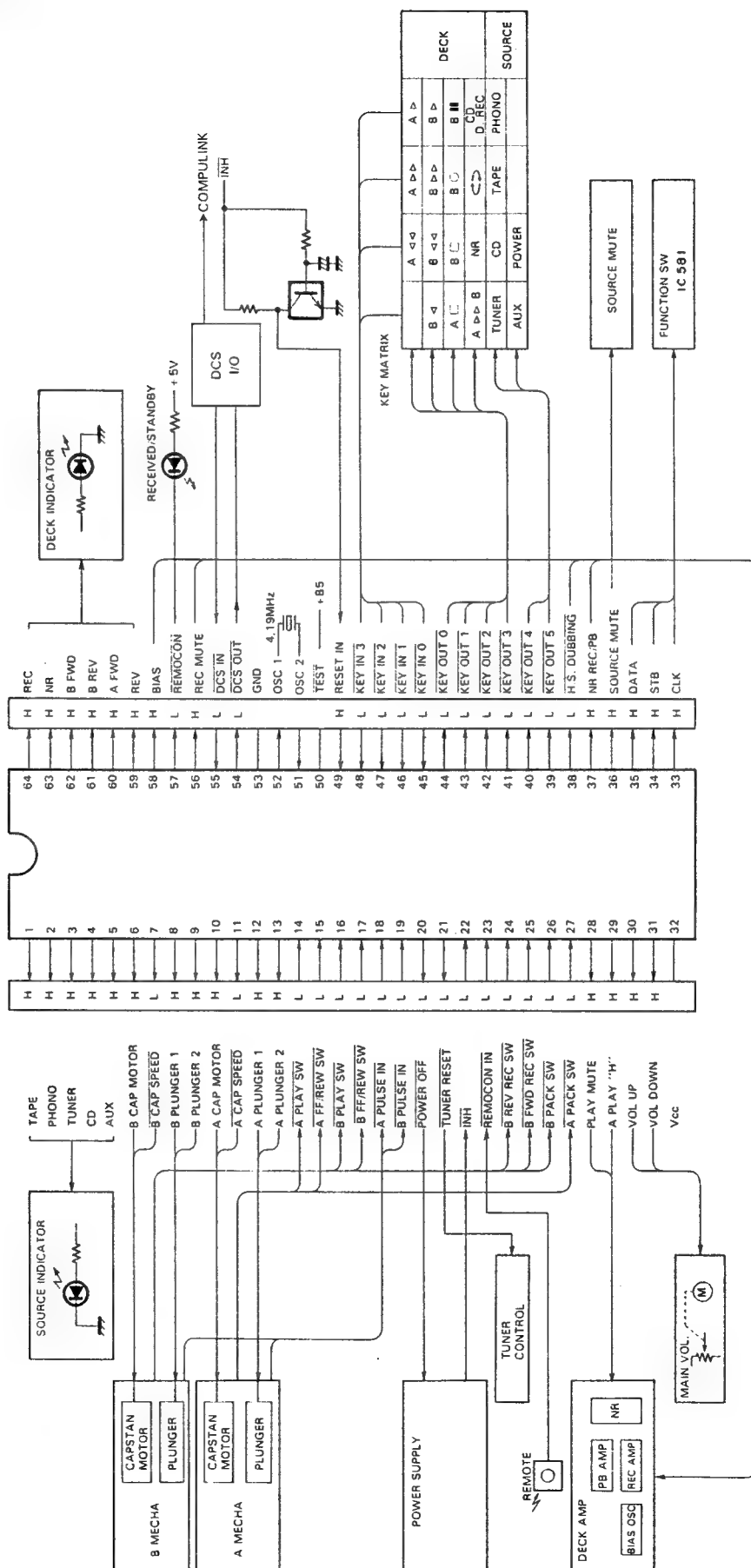


Fig. 4

### (7) Removing the Master volume

1. Pull off the master volume knob.
2. Remove the nut fixing the master volume.

# Explanation of System Control IC



EXPLANATION OF SYSTEM CONTROL IC  
HD614081-SB47 (IC501)

# Description of Major ICs

## ■ LC6514B-4245 (IC401) : TUNER CONTROLLER

### 1. Terminal Layout

KEY IN 2	1	42	KEY IN 1
KEY IN 3	3	41	KEY IN 0
INT	2	40	VDD
A BUS IN	4	39	HOLD
NC	5	38	Vp
DI	6	37	MUTE
CK	7	36	D8
DO	8	35	D7
CE	9	34	D6
A BUS OUT	10	33	D5
TUNED	11	32	D4
STEREO	12	31	D3
NC	13	30	D2
NC	14	29	D1
S1	15	28	D0
S2	16	27	S8
S3	17	26	S7
S4	18	25	S6
RES	19	24	S5
TEST	20	23	OSC2
VSS	21	22	OSC1

### 2. Key Matrix

	KEY IN 0	KEY IN 1	KEY IN 2	KEY IN 3
D0		MEMORY	AUTO MEMORY	
D1	FM	AM		
D2	UP	DOWN		
D3	1	2	3	4
D4	5	6	7	8
D5	9	10	+10	PRESET SCAN

### 3. Pin Functions

Pin No.	Symbol	I/O	Function and Operation	Pin No.	Symbol	I/O	Function and Operation
1	KEY IN 2	I	KEY MATRIX INPUT	22	OSC1	I	OSCILLATION INPUT
2	KEY IN 3	I	" "	23	OSC2	O	OSCILLATION OUTPUT
3	INT	I	PULL UP (+ 5V)	24	S5	O	FL SEGMENT OUTPUT
4	A BUS IN	I	DCS SIGNAL INPUT	25	S6	O	" "
5	NC	—	" "	26	S7	O	" "
6	DI	I	DATA INPUT	27	S8	O	" "
7	CK	O	SYSTEM CLOCK OUTPUT	28	D0	O	FL GRID OUTPUT (KEY MATRIX OUTPUT)
8	DO	O	DATA OUTPUT	29	D1	O	" "
9	CE	I	CHIP ENABLE	30	D2	O	" "
10	A BUS OUT	O	DCS SIGNAL OUTPUT	31	D3	O	" "
11	TUNED	I	"TUNED" SIGNAL INPUT	32	D4	O	" "
12	STEREO	I	"STEREO" SIGNAL INPUT	33	D5	O	" "
13	NC	—	" "	34	D6	O	" "
14	NC	—	" "	35	D7	O	" "
15	S1	O	FL SEGMENT OUT PUT	36	D8	O	" "
16	S2	O	" "	37	MUTE	O	" "
17	S3	O	" "	38	Vp	—	FL DISPLAY POWER SUPPLY
18	S4	O	" "	39	HOLD	I	INPUT SIGNAL FOR BACK UP
19	res	I	RESET SIGNAL INPUT	40	VDD		POWER SUPPLY (+ 5V)
20	TEST	I	PULL DOWN	41	KEY IN 0	I	KEY MATRIX INPUT
21	VSS	—	GND	42	KEY IN 1	I	" "

## HD614081SB47(IC501) : DECK SYSTEM CONTROLLER

### 1. Terminal Layout

TAPE	1	64	REC IND
PHONO	2	63	NR IND
TUNER	3	62	B FWD IND
CD	4	61	B REV IND
VIDEO / AUX	5	60	A FWD IND
B CAP MOTOR	6	59	REV MODE
B CAP SPEED	7	58	BIAS
B PLUNGER 1	8	57	RM IND
B PLUNGER 2	9	56	REC MUTE
A CAP MOTOR	10	55	DCS IN
A CAP SPEED	11	54	DCS OUT
A PLUNGER 1	12	53	GND
A PLUNGER 2	13	52	OSC 1
A PLAY SW	14	51	OSC 2
A FF / REW SW	15	50	TEST
B PLAY SW	16	49	RESET
B FF / REW SW	17	48	KEY IN 3
A PLUSE IN	18	47	KEY IN 2
B PLUSE IN	19	46	KEY IN 1
POWER OFF	20	45	KEY IN 0
TUNER RESET	21	44	KEY OUT 5
INH	22	43	KEY OUT 4
RM IN	23	42	KEY OUT 3
B REV REC	24	41	KEY OUT 2
B FWD REC	25	40	KEY OUT 1
B PACK SW	26	39	KEY OUT 0
A PACK SW	27	38	H,S DUB
PLAY MUTE	28	37	NR REC
A PLAY H	29	36	S, MUTE
VOL UP	30	35	DATA
VOL DOWN	31	34	STB
+5V	32	33	CLOCK

### 2. KEY matrix

	KEY IN 0	KEY IN 1	KEY IN 2	KEY IN 3
KEY OUT 0	—	◀	▶	▶
KEY OUT 1	B ◀	B ◀	B ▶	B ▶
KEY OUT 2	A ■	B ■	B ●	B ■
KEY OUT 3	A ▶▶ B	NR	↻	CD D. REC
KEY OUT 4	TUNER	CD	TAPE	PHONO
KEY OUT 5	VIDEO / AUX	POWER		

### 3. Pin Function Description

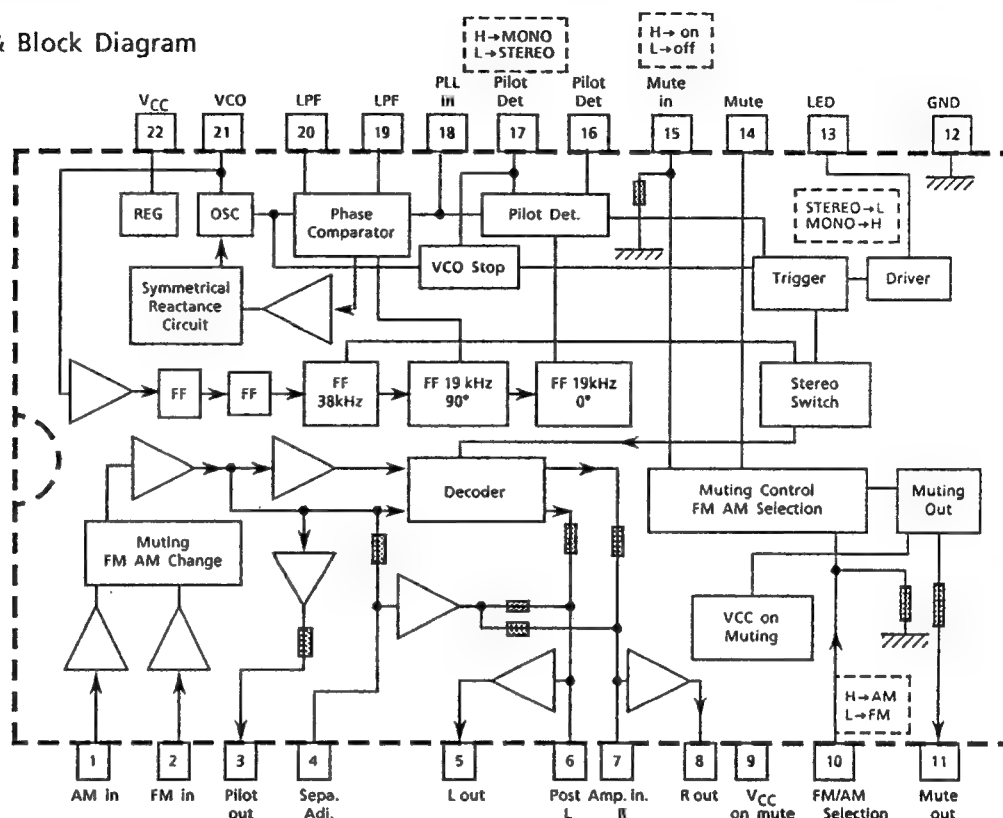
Pin NO.	symbol	I/O	Function and Operations	Pin NO.	symbol	I/O	Function and Operations
1	TAPE	O	Tape indicator	33	CLOCK	O	Clock output
2	PHONO	O	Phono indicator	34	STB	O	Strobe signal output
3	TUNER	O	Tuner indicator	35	DATA	O	Data output
4	CD	O	CD indicator	36	S, MUTE	O	Source mute control
5	VIDEO / AUX	O	VIDEO / AUX indicator	37	NR REC	O	NR rec / play control
6	B CAP MOTOR	O	Capstan motor control	38	H,S DUB	O	High speed dubbing control signal
7	B CAP SPEED	O	Capstan speed control	39	KEY OUT 0	O	Key matrix output 0
8	B PLUNGER 1	O	Plunger control 1	40	KEY OUT 1	O	Key matrix output 1
9	B PLUNGER 2	O	Plunger control 2	41	KEY OUT 2	O	Key matrix output 2
10	A CAP MOTOR	O	Capstan motor control	42	KEY OUT 3	O	Key matrix output 3
11	A CAP SPEED	O	Capstan speed control	43	KEY OUT 4	O	Key matrix output 4
12	A PLUNGER 1	O	Plunger control 1	44	KEY OUT 5	O	Key matrix output 5
13	A PLUNGER 2	O	Plunger control 2	45	KEY IN 0	I	Key matrix input 0
14	A PLAY SW	I	"L" with playing	46	KEY IN 1	I	Key matrix input 1
15	A FF / REW SW	I	"L" with doing FF / REW	47	KEY IN 2	I	Key matrix input 2
16	B PLAY SW	I	"L" with playing	48	KEY IN 3	I	Key matrix input 3
17	B FF / REW SW	I	"L" with doing FF / REW	49	RESET	I	Reset signal input
18	A PLUSE IN	I	A deck reel pulse input	50	TEST		Pull up ( + 5V)
19	B PLUSE IN	I	B deck reel pulse input	51	OSC 2		Clock oscillator input
20	POWER OFF	O	RELAY OFF OUTPUT	52	OSC 1		Clock oscillator output
21	TUNER RESET	O	TUNER RESET OUTPUT	53	GND		
22	INH	I	INPUT SIGNAL FOR BACKUP	54	DCS OUT	O	DCS signal output
23	RM IN	I	REMOCON SIGNAL INPUT	55	DCS IN	I	DCS signal input
24	B REV REC	I	DETECT THE SAFETY LUGS	56	REC MUTE	O	Rec mute control
25	B FWD REC	I	DETECT THE SAFETY LUGS	57	RM IND	O	Remocon indicator
26	B PACK SW	I	DETECT THAT THERE IS TAPE OR NOT	58	BIAS	O	BIAS Control
27	A PACK SW	I	DETECT THAT THERE IS TAPE OR NOT	59	REV MODE	O	Reverse mode indicator
28	PLAY MUTE	O	PLAYBACK MUTE OUTPUT	60	A FWD IND	O	A FWD indicator
29	A PLAY H	O	It is "H" at A play, "L" at B play	61	B REV IND	O	B REV indicator
30	VOL UP	O	Volume control	62	B FWD IND	O	B FWD indicator
31	VOL DOWN	O	Volume control	63	NR IND	O	NR indicator
32	+5V		Power supply	64	REC IND	O	Recording indicator

■ IC105 : LA3401 (FM MPX Detector)

## 1. The main function descriptions

- (1) Detect the FM Multiplex Signal (Stereo signal).
- (2) When the FM Signal is Stereo Modulation, it will output the signal for indicator.
- (3) AM / FM Audio Amplifier.

## 2. Top View & Block Diagram



### 3. Pin Function Description

Pin No.	Symbol	H/L	I/O	Functions and Operations
1	AM in			This is an input terminal for AM detection signal.
2	FM in			This is an input terminal for FM detection signal.
3	Pilot out			Output of MPX pilot signal (Connected to Pin18).
4	Sepa. Adj.			Separation adjustment.
5	L. out		O	Left channel signal output.
6	RL		O	Reversal output of Pin5.
7	RR		O	Reversal output of Pin8.
8	R out		O	Right channel signal output
9	V <sub>CC</sub> on mute			The muting time after power on is controlled by the connected capacitor.
10	FM/AM		I	Switch-over the FM/AM input. "H" : AM, "L" : FM
11	Mute out		O	Muting signal output.
12	GND			Ground terminal.
13	Stereo		O	Stereo indicator output. Stereo : "L", Mono : "H"
14	Mute			The muting time at switch-over the FM/AM is changed by the connected capacitor.
15	Mute in		I	Muting signal input. "H" : Mute on, "L" : Mute off.
16	LPF			Low pass filter of pilot detector.
17	LPF			While this terminal going "H", the VCO stop.
18	Pilot in			PLL input.
19	LPF			Loop filter of PLL.
20	LPF			Loop filter of PLL.
21	VCO			Voltage controlled oscillator terminal.
22	V <sub>CC</sub>			Power supply.



## LA1266A (IC104) : FM AM IF AMP & detector

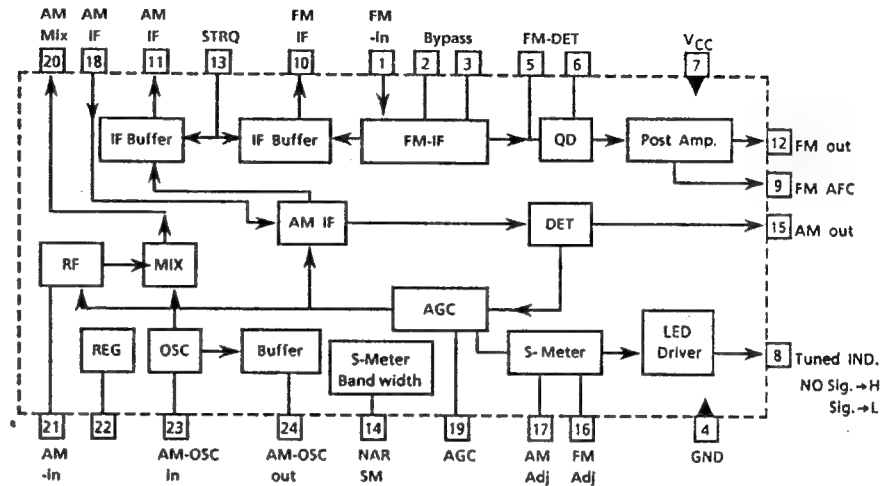
### 1. The main function descriptions

- (1) Amplify and detect of FM intermodulation frequencies.
- (2) It has local oscillator and mixer for AM, and amplify the AM-IF signal.

### 2. Top View

FM-In	1	24	AM-OSC out
Bypass	2	23	AM-OSC
Bypass	3	22	V.ref
GND	4	21	AM-In
FM-DET	5	20	AM-Mix
FM-DET	6	19	AM-AGC
V <sub>cc</sub>	7	18	AM-IF
Tuned	8	17	AM Adj.
FM-AFC	9	16	FM Adj
FM-IF	10	15	AM out
AM-IF	11	14	NAR SM
FM-out	12	13	STRQ

### 3. Block Diagram



### 4. Pin Function Description

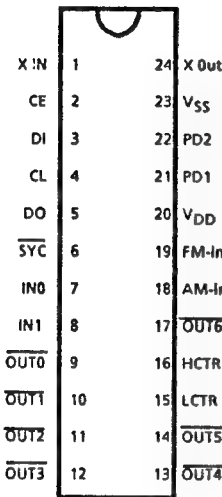
Pin No.	Symbol	I/O	Functions and Operations
1	FM in	I	This is an input terminal of FM IF Signal.
2,3	Bypass		Bypass of FM IF Amp.
4	GND		This is the device ground terminal.
5,6	FM DET		FM detect transformer.
7	V <sub>cc</sub>		This is the power supply terminal.
8	Tuned		Not used.
9	FM AFC	O	This is an output terminal of voltage for FM - AFC.
10	FM IF out	O	When the signal of IF REQ of IC102(LC7218) applied to pin17, the signal of FM IF does output.
11	AM IF out	O	When the signal of IF REQ of IC102(LC7218) applied to pin17, the signal of AM IF does output.
12	FM out	O	FM detection output.
13	STRQ	I	The IF-signals come out from pin10 (FM-IF) or pin11 (AM-IF) while this terminal going to "High".
14	NAR SM		Control the Band-width of signal meter.
15	AM out	O	AM detection output.
16	FM Adj		For adjust the stop level (or mute level) of FM.
17	AM Adj		For adjust the stop level (or mute level) of AM.
18	AM-IF	I	Input of AM IF Signal.
19	AM-AGC	I	This is an AGC voltage Input terminal for AM.
20	AM-MIX	O	This is an output terminal for AM mixer.
21	AM-IN	I	This is an input terminal for AM RF Signal.
22	V.REF		
23	AM-OSC		This is a terminal of AM Local oscillation circuit.
24	AM-OSC out	O	AM Local Oscillation Signal output.

## IC102 : LC7218 ( PLL Synthesizer )

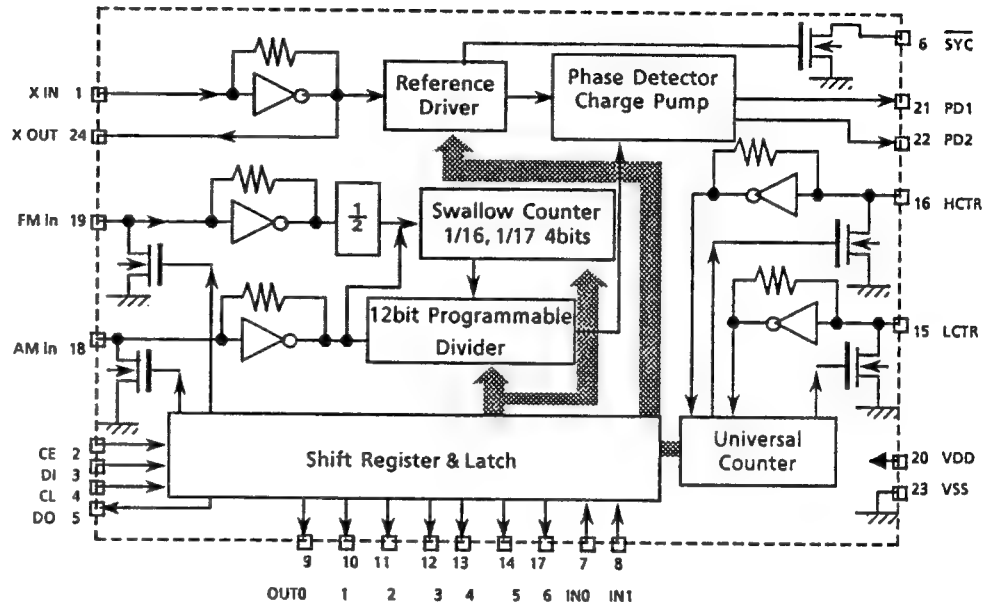
### 1. The main function descriptions

- (1) It makes the local oscillation frequency by the control data from IC401.
- (2) Decode the control signal and transmit the signal for receiving conditions.
- (3) For the best tuning, count the internal-frequency and transmit the data to IC401.

### 2. Terminal Layout



### 3. Block Diagram

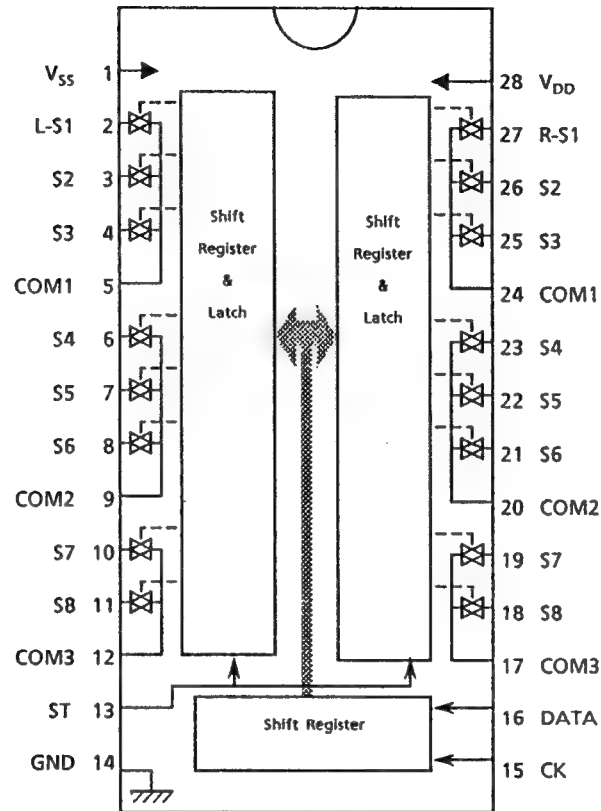


### 4. Pin Function Description

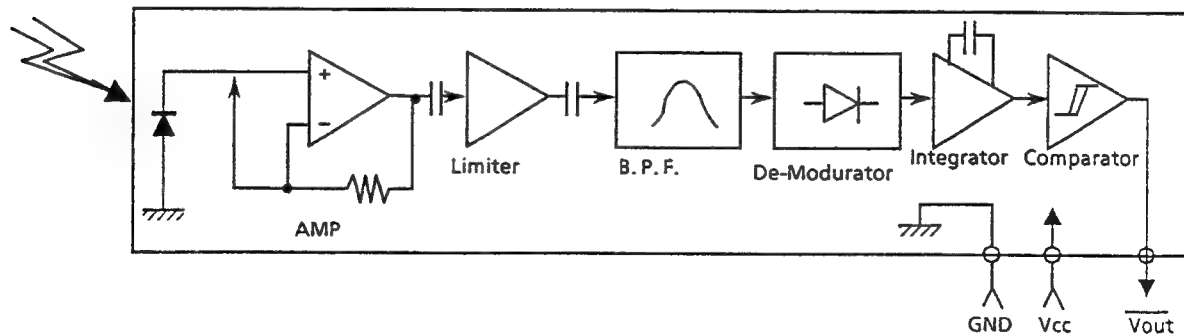
Pin No.	Symbol	Name	I/O	Functions and Operations
1,24	X in, X out	X in, X out	I/O	Crystal oscillator (7.2MHz).
2	CE	CE	I	Fix the chip enable to "H" when inputting (DI) and outputting (DO) the serial data.
3	DI	DI	I	Receive the control data from the controller (IC401).
4	CL	CL	I	This clock is used to synchronize data when transmitting the data of DI and DO.
5	DO	DO	O	Transmit the data from LC7218 to the controller which is synchronized with CL.
6	SYC	SYC	—	Not used.
7	IN0	Tuned in	I	Receive the tuned signal from IC104 (LA1266A).
8	IN1	Stop in	I	Not used.
9	OUT 0	POWER	O	Not used.
10	OUT 1	QSC	O	ON mode with "H" and OFF mode with "L".
11	OUT2	MONO	O	It is "H" on FM-monaural, "L" on FM-Stereo.
12	OUT3	FM	O	It is "H" on FM mode.
13	OUT4	MW	O	It is "H" on AM mode.
14	OUT5		—	Not used.
15	LCTR	AM-IF	I	Universal counter input for AM-IF from IC104 (LA1266A).
16	HCTR	FM-IF	I	Universal counter input for FM-IF from IC104 (LA1266A).
17	OUT6	IF REQ	O	Output the "IF-signal request" to IC104 when the pin-7 (tuned in) go to "H".
18	AM in	AM in	I	Input the local oscillator signal of AM.
19	FM in	FM in	I	Input the local oscillator signal of FM.
20	V <sub>DD</sub>	V <sub>DD</sub>	—	This is a terminal of power supply.
21	PD1	PD1	O	PLL charge pump output : When the local oscillator signal frequency is higher than the reference frequency high level signals will output. When it is lower than the reference frequency, low level signals will output. When it is same as reference frequency signals, it will be floating.
22	PD2	PD2	O	Not used.
23	V <sub>SS</sub>	V <sub>SS</sub>	—	Power supply.

## Explanation of Other ICs

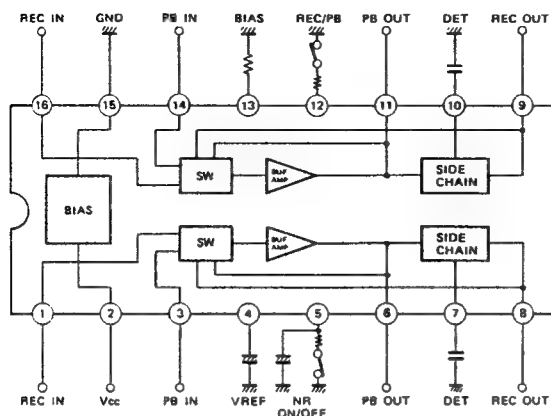
### ■ TC9163N (IC581) : Analog Switch



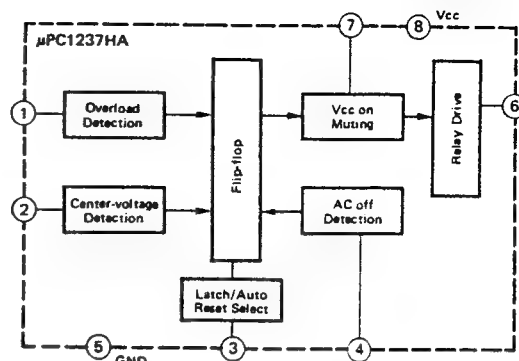
### ■ GP1U501X (IC502) : Remocon Module IC



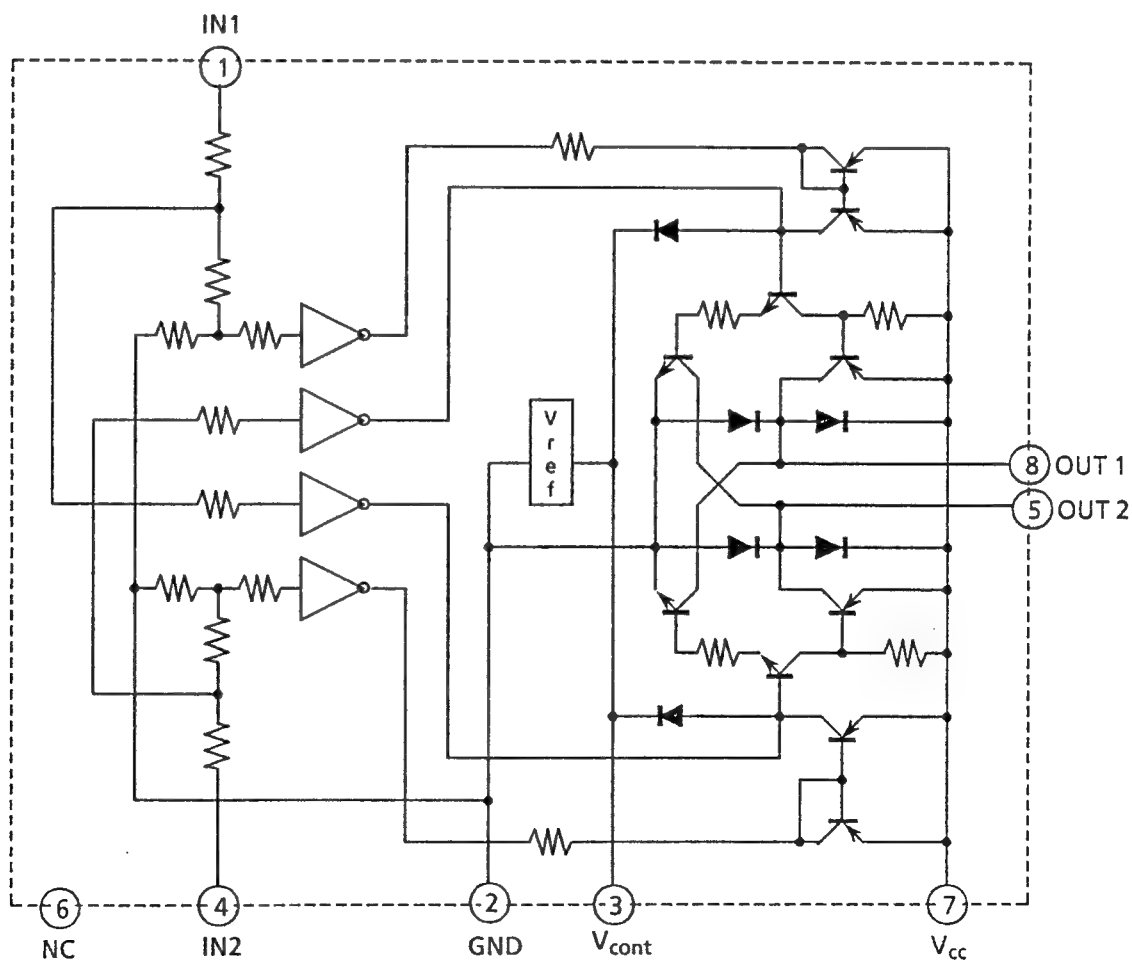
■ HA12136A (IC381) : Noise Reduction amplifier



■  $\mu$ PC1237HA (IC002) : Protector



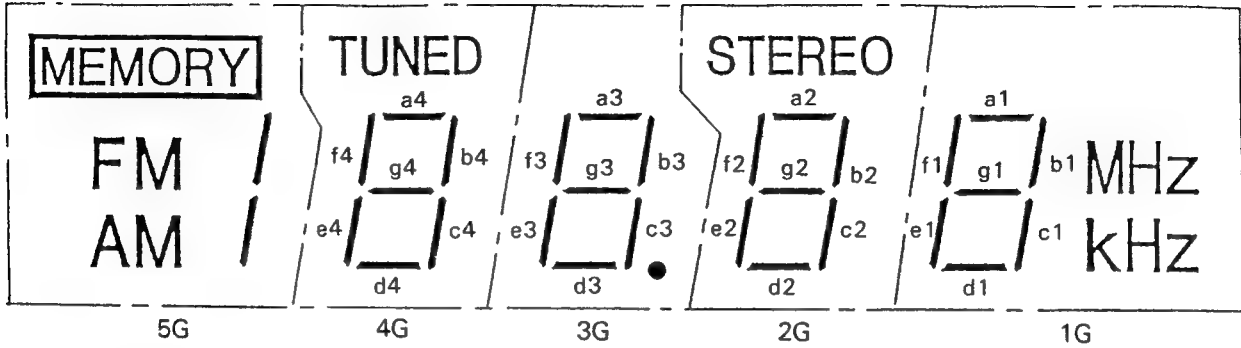
■ LB1639-CV (IC503): Motor Driver



# Internal Connections of the FL Display Tube

■ ELU0001-077 (FL401)

(1) Grid Layout



(2) Pin Connections

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Electrode	F	F	NP	NC	5G	S4	5G	S3	4G	S2	S1	3G	S5	NC	2G	NC	S6	1G

Pin No.	19	20	21	22	23	24
Electrode	S7	1G	S8	NP	F	F

(3) Anode Connection Table

	5G	4G	3G	2G	1G
S1		TUNED	●	STEREO	
S2		a4	a3	a2	
S3		b4	b3	b2	MHz
S4	MEMORY	c4	c3	c2	kHz
S5		d4	d3	d2	g1
S6	FM	e4	e3	e2	f1, c1
S7	AM	f4	f3	f2	b1, e1
S8	/	g4	g3	g2	a1, d1

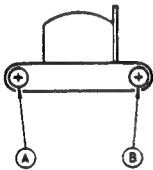
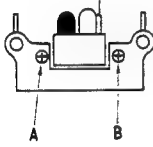
# Adjustment Procedures (Cassette Deck)

## (1) Measuring instruments necessary for Adjustment

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. Low frequency oscillator (Output of 0db should be obtain at the 600 ohm terminal at a frequency of 50Hz ~20kHz)</li> <li>2. Attenuator (600 ohm impedance)</li> <li>3. Electric voltmeter</li> <li>4. STANDARD TAPES<br/>VTT-703L(for head azimuth adjustment)<br/>VTT-712 (for tape speed , wow &amp; flutter)<br/>VTT-724 (standard level)</li> </ol> | <ol style="list-style-type: none"> <li>5. Recording standard tapes<br/>AC-513 (CrO2), TS-5 (SF) or equivalent. (Use the standard tape specified by JVC Audio Division.)</li> <li>6. 600-ohm impedance (for attenuator matching)</li> <li>7. Distortion factor meter (bandpass filter)</li> <li>8. Torque gauge : CTG-N (cassette type)</li> <li>9. C-120 tape (for checking the tape running)</li> </ol> |
|---|--|

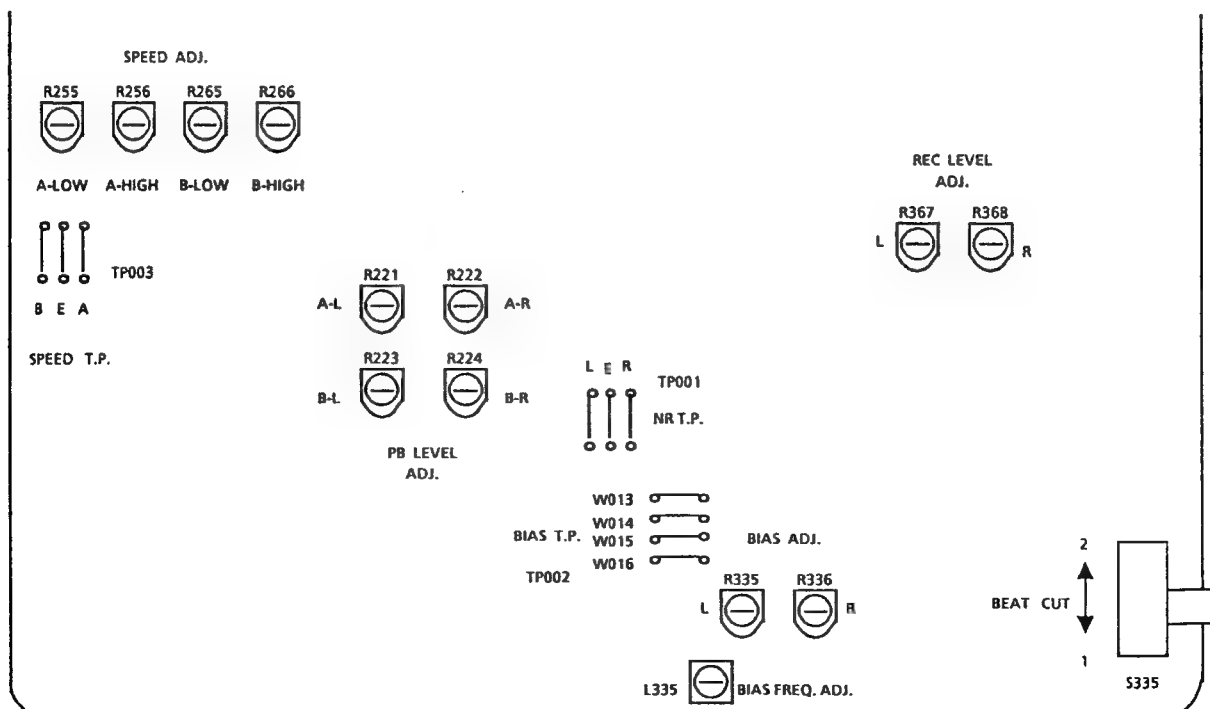
## (2) Adjustment and repairing the mechanism

(Adjust and check the mechanism before adjusting the electric circuit)

Item	Adjustment method	Standard value	Remarks
Adjusting azimuth of rec/play head	<ol style="list-style-type: none"> <li>1. Connect the output from the SPK OUT terminal to the voltmeter.(At about 1 volt)</li> <li>2. Play back VTT-703L</li> </ol>		<ol style="list-style-type: none"> <li>1) When the specified characteristic cannot be obtained because of head wear, cut wire, excessive magnetization, etc., replace the head and adjust the head azimuth. Also, perform the adjustment of the playback level, recording bias current, recording level, etc.</li> <li>2) When there is the difference of more than 3 ~ 4 dB between left and right output levels, replace the head to avoid complaints.</li> </ol>
<b>A mechanism</b> 	<ol style="list-style-type: none"> <li>3. Adjust screw A so that the output of the voltmeter becomes maximum when PLAY ► is pressed.</li> </ol>	Maximum	
	<ol style="list-style-type: none"> <li>4. Paint screw A and B with screw locking compound so they do not come loose after adjustment.</li> </ol>		
<b>B mechanism</b> 	<ol style="list-style-type: none"> <li>5. Adjust screw A so that the output of the voltmeter becomes maximum when PLAY ► is pressed.</li> </ol>	Maximum	
	<ol style="list-style-type: none"> <li>6. Adjust screw B so that the output of the voltmeter becomes maximum when PLAY ◀ is pressed.</li> </ol>	Maximum	
	<ol style="list-style-type: none"> <li>7. Paint screws A and B with screw locking compound so they do not come loose after adjustment.</li> </ol>		
Playback torque	Measure the torque in the playback mode using the torque measurement cassette CTG-N.	30 ~ 65 g-cm	When the standard torque cannot be obtained, clean or replace the take-up disc assembly.
Fast forward torque	Measure the torque in the fast forward mode by the same procedure.	75 ~ 130 g-cm	When the standard torque cannot be obtained, 1) Clean the capstan belt, rim of the fly-wheel, motor pulley, etc. 2) Change the belt, idler, etc.
Rewind torque	Measure the torque in the rewind mode by the same procedure.	75 ~ 130 g-cm	When the standard torque cannot be obtained, clean the motor pulley, capstan, rim of the fly-wheel, rim of the supply reel disc, etc.
Wow & flutter	Play back VTT-712 and attach the wow & flutter meter to the SPK OUT terminals of this unit; its reading should be within 0.16% (WRMS).		As a complaint may occur if the wow & flutter fluctuates by 0.1% even though it is allowed in the standard, repairing is required.



	Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
* 4	Recording Level	1) Add a 1 kHz (-8 db) input to the AUX terminal and record on the left and right channels using normal tape. 2) When playing this back, adjust the recording signal current so that output among W022(L), W021(E) of TP001 and W020(R), W021(E) of TP001 is -5.5db.	R367(L) R368(R)	-5.5db	Adjust with normal tape and make sure that the level difference is 1.5 dB or less with CrO <sub>2</sub> tape and that the left/right level difference is 1.0 dB or less.
* 5	Recording/ playback distortion check	1) Record a 1 kHz (-8 db) AUX input signal. 2) Play this back and check the output with a distortion meter to make sure it is the rated value.		3% or less with normal tape or CrO <sub>2</sub> tape.	Perform after the bias current and recording level adjustments.
6	Recording/ playback S/N ratio check	1) Record 1 kHz (-8dB) AUX output signal. While recording, remove the input and record without a signal. 2) Play this back and use an electronic voltmeter to compare the 0 dB recording output and the out-put of the recording without a signal to make sure this is the rated value.		45 dB or more with normal tape or CrO <sub>2</sub> tape	
7	Erase ratio check	1) Record a 1 kHz (0 dB) AUX input signal. 2) Rewind and erase part of the recorded section. 3) Compare the outputs of the recorded and erased sections using an electronic voltmeter.		60 dB or more	Connect a 1 kHz band-pass filter between the deck and electronic Voltmeter When making the adjustment.
8	Auto-stop check	When playing back and recording, make sure to operate AUTO STOP.			



### (3) Electrical Circuit Adjustments

Make the following adjustments after adjusting the head azimuth.

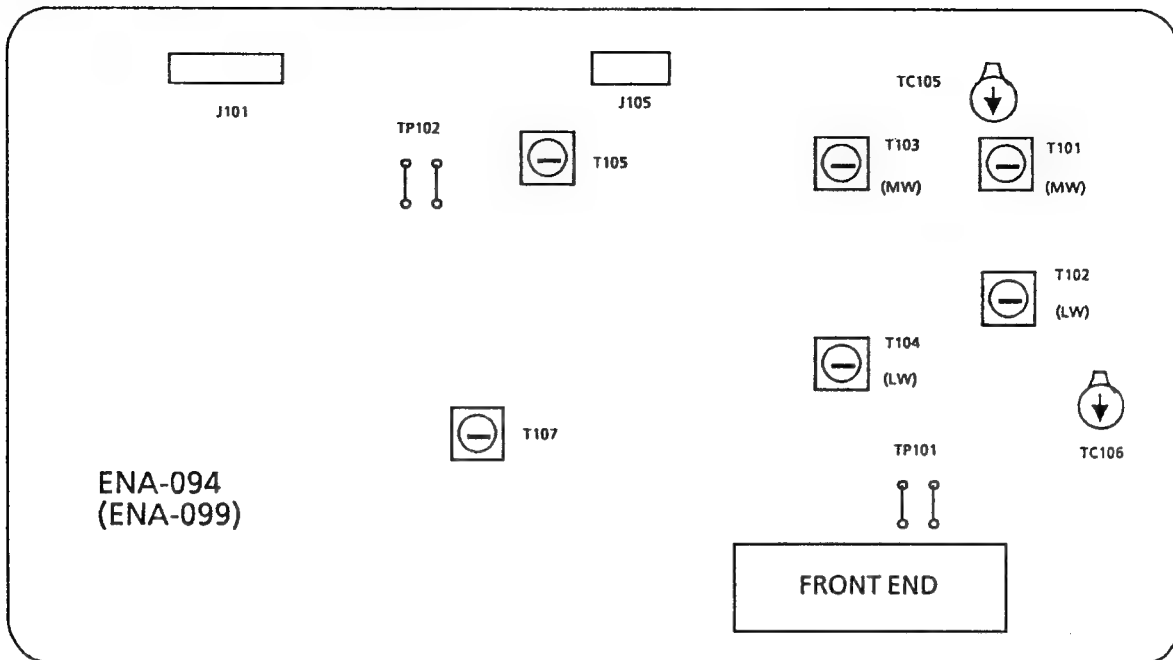
In principle, the adjustments should be made in the following sequence.

Set the NR switch to OFF and the BEAT CUT switch to "1".

Adjustments marked with an asterisk (\*) should always be made after the head is replaced.

Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
Motor speed	1. Playback VTT-712 with the deck set to TAPE and an electronic counter connected to the SPK OUT terminal.	Semi-fixed resistor of the audio PC Board		Connect a wow & flutter meter with a built-in electronic counter to the INPUT.  A-Mechanism : Short-circuit W032 and W033(TP003) when performing double-speed adjustment. B-Mechanism : Short-circuit W031 and W032(TP003) when performing double-speed adjustment, (Be sure to set the deck to the PLAY mode first before short-circuiting TP003. Do not operate the deck while it is short-circuited.)
	2. Normal speed Adjustment 1) Mechanism A adj.: Play back deck A and adjust the semi-fixed resistor R255 on the motor drive PC Board by turning it so that the reading of meter is 3,000 Hz. 2) Mechanism B adj.: Play back deck B and adjust the semi-fixed resistor R265 by turning it so that the reading of meter is 3,000 Hz.	R255  R265	3,000 Hz	
	3. Double-speed adjustment 1) Mechanism A adj.: Play back deck A and adjust the semi-fixed resistor R256 by turning it so that the reading of meter is 6,000 Hz. 2) Mechanism B adj.: Play back deck B and adjust the semi-fixed resistor R266 by turning it so that the reading of meter is 6,000 Hz.	R256  R266	6,000Hz	
* 1	Playback level Playback VTT-724 (1 kHz) and adjust so that the output among W022(L), W021(E) of TP001 and W020(R), W021(E) of TP001 is -5.5dBs.	<div style="border: 1px solid black; padding: 2px;">A</div> (L) R221 (R) R222 <div style="border: 1px solid black; padding: 2px;">B</div> (L) R223 (R) R224	-5.5dbs	The playback level varies when the head is replaced so should be adjusted. Use an electronic voltmeter with an impedance of 100 kΩ or more.
* 2	Recording bias frequency Connect a frequency counter between W015 and W016 of TP002 and perform recording with a CrO <sub>2</sub> tape.	L335	105 kHz +2 kHz -5 kHz	
* 3	Recording frequency response Record 100 Hz/1 kHz/10 kHz with the NR switch off and -30 dbS input from AUX. While playing back these recorded signals, adjust the variation of the 100 Hz and 10 kHz outputs from the 1kHz output to the standard value using R335 and R336. (Basically, adjust so that the 1 kHz and 10 kHz outputs are flat.)	R335(L) R336(R)	0±3 dB for 100 Hz and 10 kHz with 1 kHz as the standard.	1) The recording and playback frequencies of a cassette deck are adjusted by adjusting the bias. This is because the frequency response depends more on the bias current than with an open-reel deck. 2) Perform the adjustment with normal tape and confirm that the values are within the range for CrO <sub>2</sub> tape.
Note: After completing the recording level adjustment in item 3, check the recording and playback frequencies with the NR switch on. Fine adjust again if the value is 0±4 dB or more at 1 kHz and 10 kHz.				

## Alignment Procedures (Tuner)



### 3-1 Front-end Section

1. Set the frequency display to "108.0 MHz" and the FM MODE switch to "MONO" position.
2. Confirm that there is noise with no input signal.
3. Confirm that the output of test point "TP101" is  $8.0 \pm 2V$ .
4. Set the frequency display to "87.5MHz" and confirm that the output of test point "TP101" is  $1.6 \pm 1V$ .

LW antenna trimmer : TC106

6. Adjust TC106 to obtain the best receiving sensitivity on 353kHz.

#### In case of Italy

6. Adjust TC106 to obtain the best reception sensitivity at 245kHz.

### 3-2 IF, Detection and MPX

FM detector coil : T105

1. Connect a center-meter or a digital voltmeter to test point "TP102", and tune to a 100.1 MHz signal (1kHz modulation, 75kHz or 40kHz deviation) with SSG ATT 70dB.
2. Adjust T105 so that the center-meter indicates "0" or the digital voltmeter reads  $0 \pm 1.5 mV$ .

### 3-4 MW Section

Note : ( ) ; Australia, the U.K. and Continental Europe  
MW oscillator coil : T103

1. Set the frequency display to (522kHz) and confirm that the output of test point "TP101" is  $(0.9 \pm 0.2V)$ .
2. Set the frequency display to (1629kHz) and confirm that the output of test point "TP101" is  $(7.5 \pm 0.8V)$ .

### 3-3 LW Section (for Europe only)

LW oscillator coil : T104

1. Set the frequency display to 144 kHz.
2. Adjust T104 to obtain  $0.8 \pm 0.4V$  at test point "TP101".
3. Set the frequency display to 353 kHz and confirm that the output of test point "TP101" is  $7.7 \pm 0.6V$ .

#### In case of Italy

1. Set the frequency display to 144kHz.
2. Adjust T104 to obtain  $1.0 \pm 0.1V$  at test point "T101".
3. Set the frequency display to 290kHz and confirm that the output of test point "TP101" is  $5.7 \pm 0.6V$ .

LW antenna coil : T102

4. Connect a loop antenna to the "AM LOOP" terminal on the rear panel.
5. Adjust T102 to obtain the best reception sensitivity at 164kHz.

#### Except for Australia, the U.K. and Continental Europe

1. Set the frequency display to (531kHz) and confirm that the output of test point "TP101" is  $1.0 \pm 0.2V$ .
2. Set the frequency display to (1602kHz) and confirm that the output of test point "TP101" is  $7.2 \pm 0.7V$ .

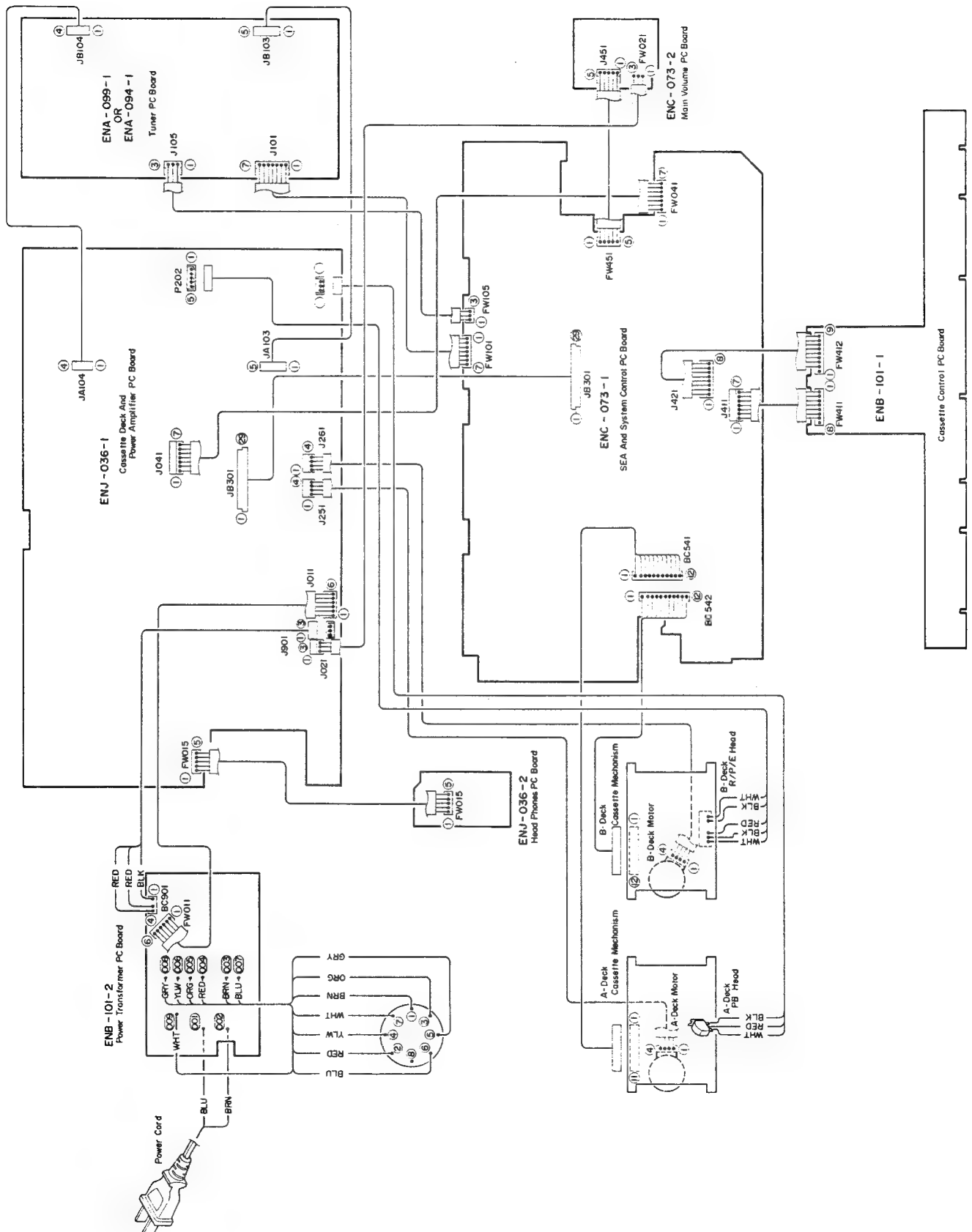
MW antenna coil : T101

4. Connect a loop antenna to the "AM LOOP" terminal on the rear panel.
5. Adjust T101 to obtain the best reception sensitivity at (603kHz).

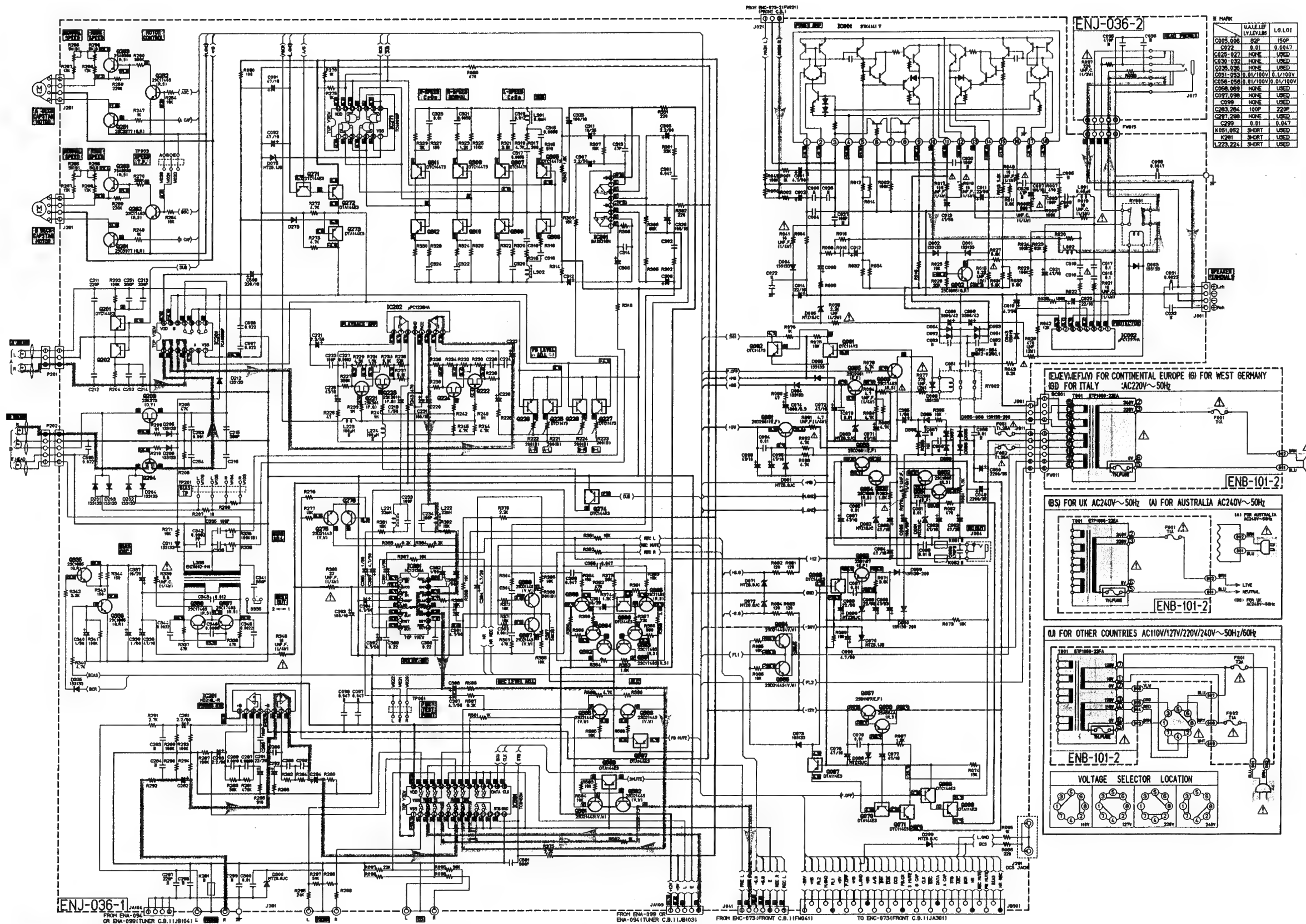
MW antenna trimmer : TC105

6. Adjust TC105 to obtain the best reception sensitivity at (1404kHz).

# Connection Diagram



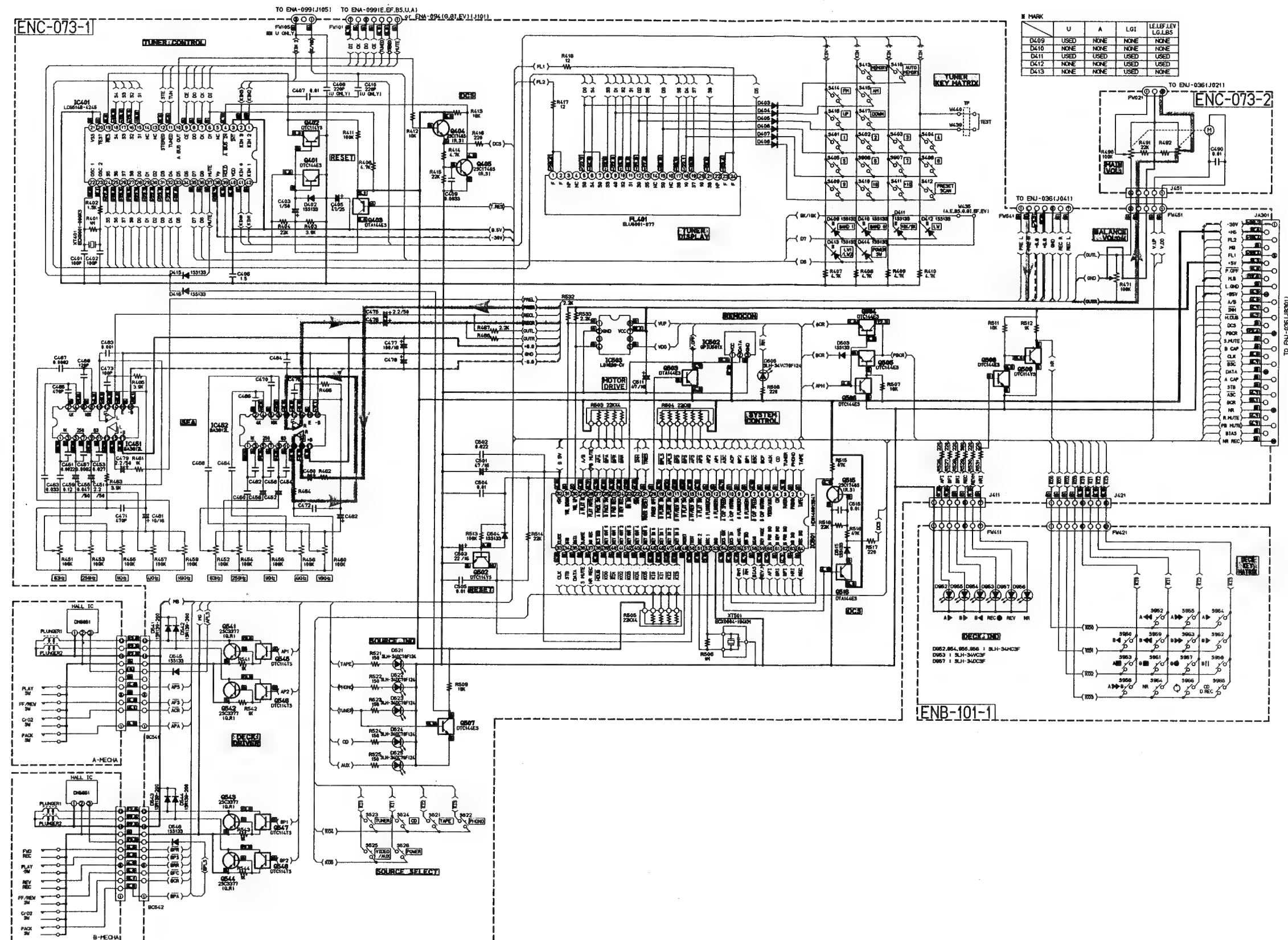
# ■ Cassette & Power Amplifier Section



DR-E34BK  
DR-E34LBK

DR-E34BK  
DR-E34LBK

# SEA & System Control Section

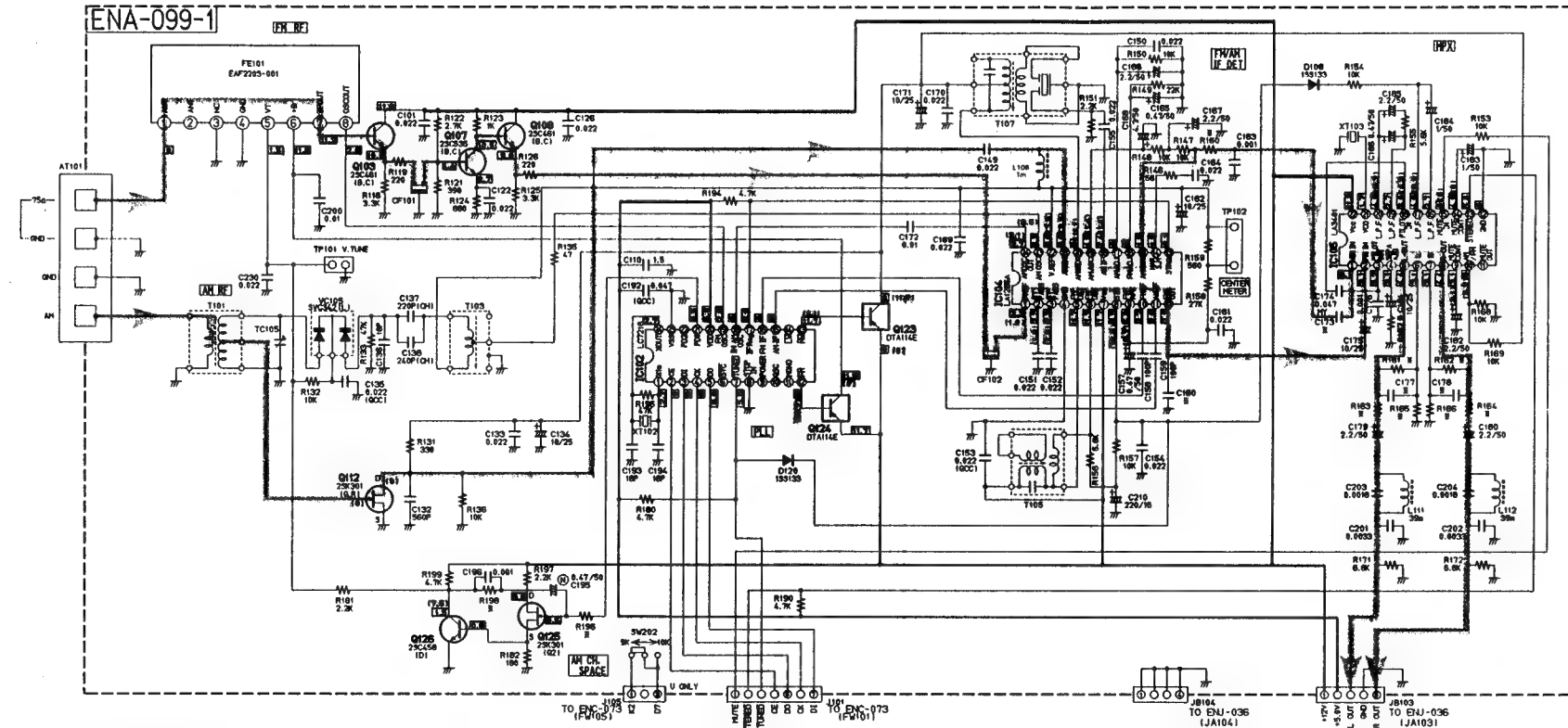




## Schematic Diagram

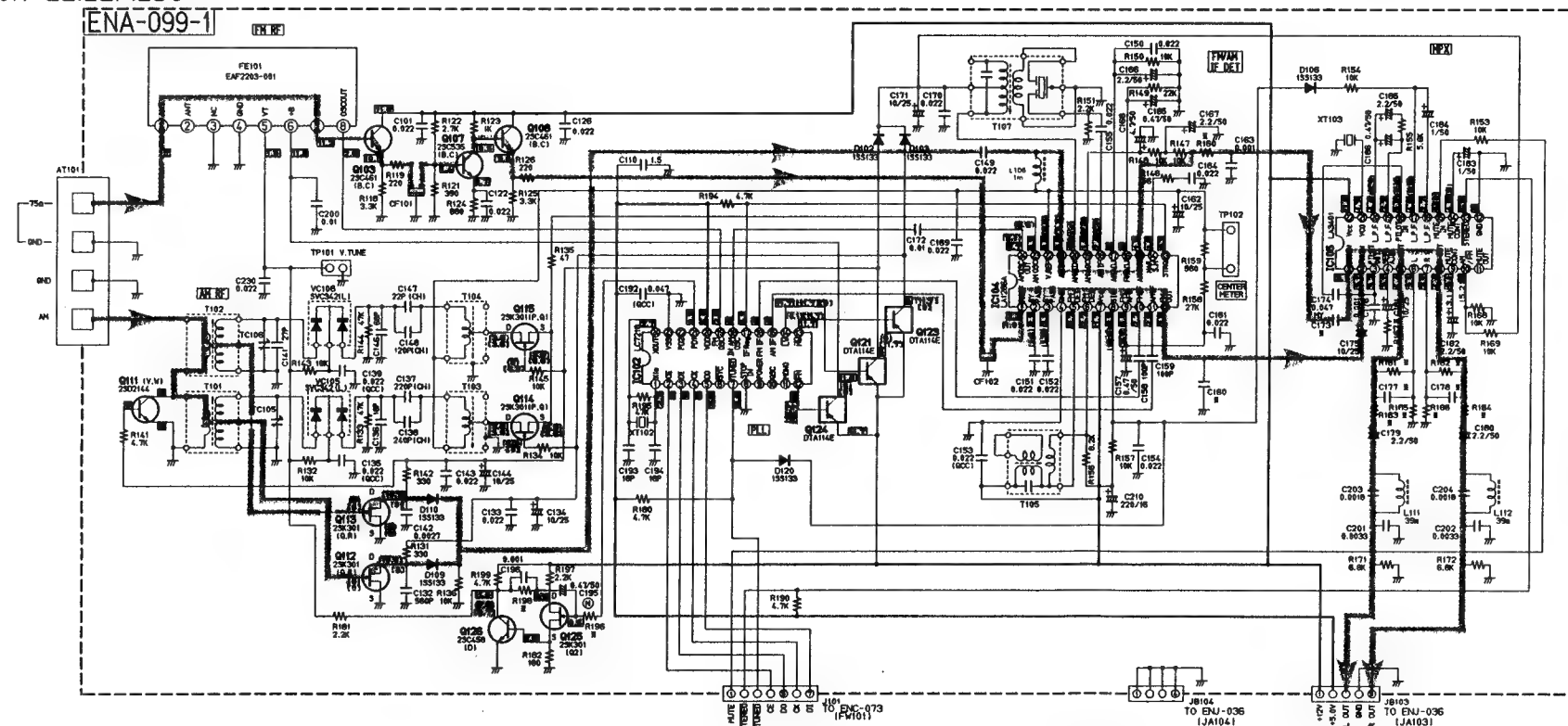
### ■ Tuner Section (1)

FOR A.U









MARK	U	A	L.E.F.F	LBS
R160	5.6K	18K	18K	8.2K
R161, 162	82K	120K	120K	82K
R163, 164	4.7K	3.9K	3.9K	3.9K
R165, 166	180K	270K	270K	270K
R167	39K	47K	47K	47K
R196	10K	10K	2.2K	2.2K
R198	3.3K	3.3K	6.2K	6.2K
C160	220P	220P	100P	100P
C173	0.039	0.022	0.022	0.022
C177, 178	820P	390P	390P	560P

FOR LE.LEF.LBS



FM AUTO NO SIGNAL  
MW NO SIGNAL  
LW NO SIGNAL

**Notes:**

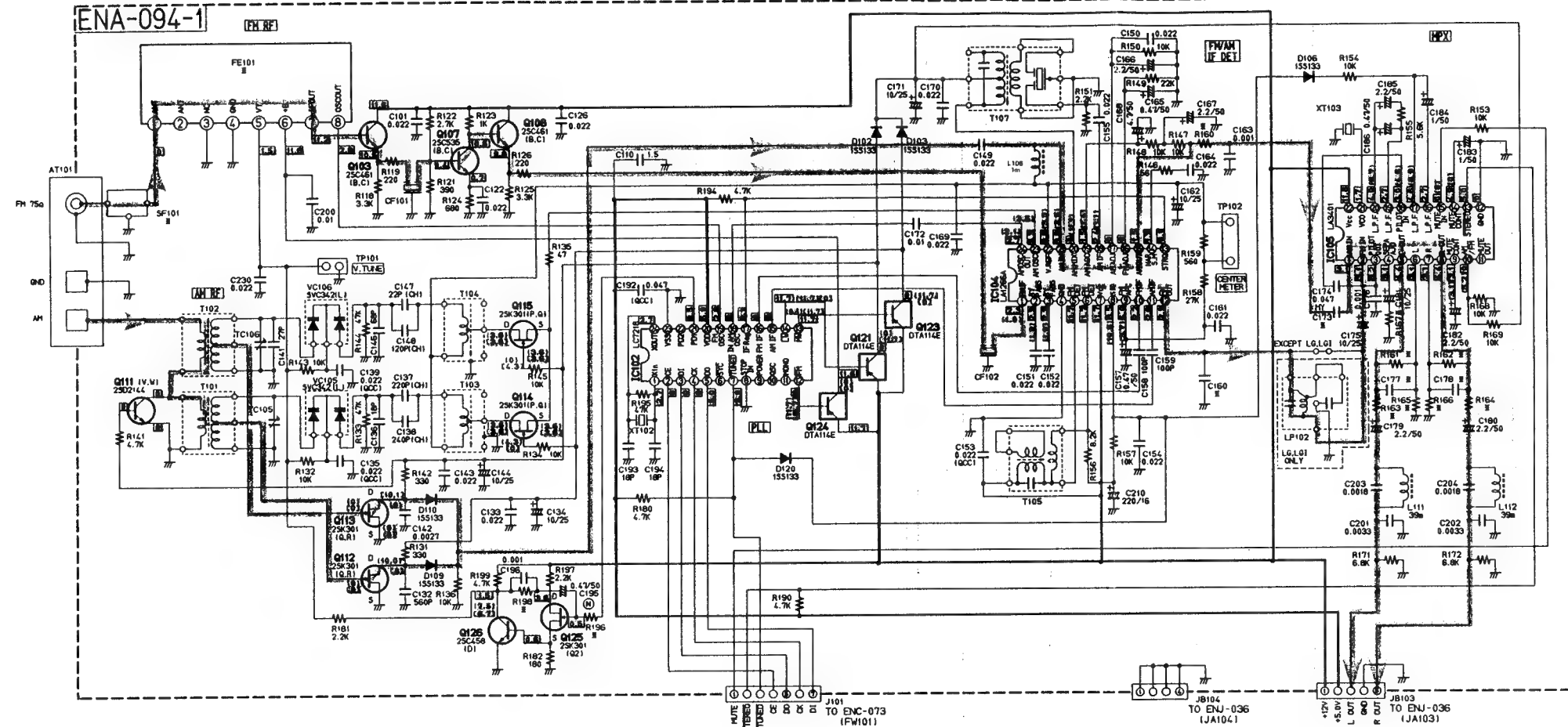
1.  Shows DC voltage to the chassis with no signal input.
2.  indicates +B power supply.
3.  indicates -B power supply.
4.  indicates signal path.
5. When replacing the parts in the darkened are (  ) and those marked with  , be sure to use the designated parts to ensure safety.
6. This is the standard circuit diagram.
- The design and contents are subject to change without notice.

DR-E34BK  
DR-E34LBK

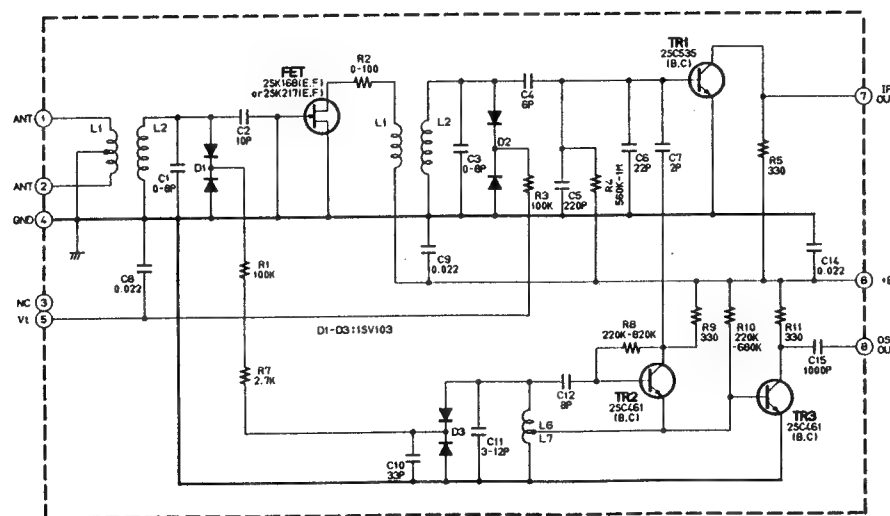
DR-E34BK  
DR-E34LBK

■ Tuner Section (2)

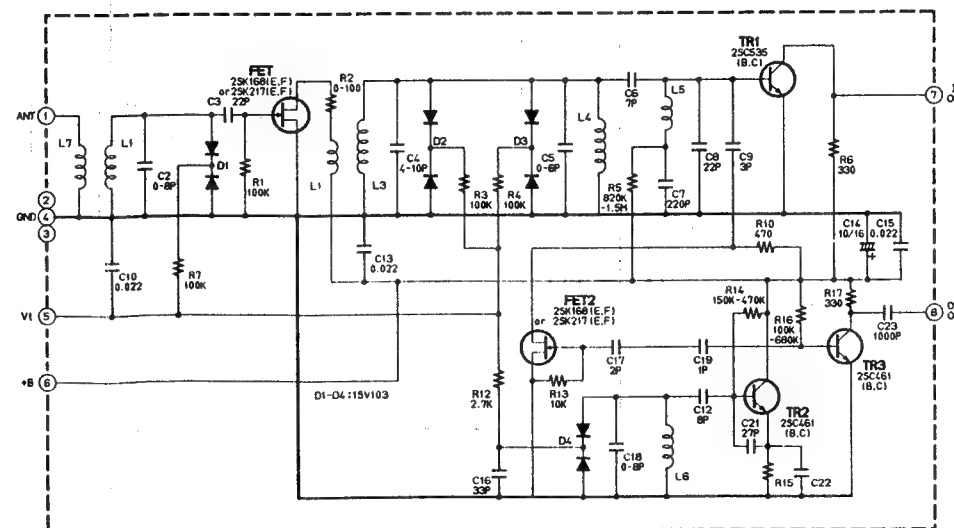
FOR LEV,LG,LGI



EAF2203-001



EAF2203-002

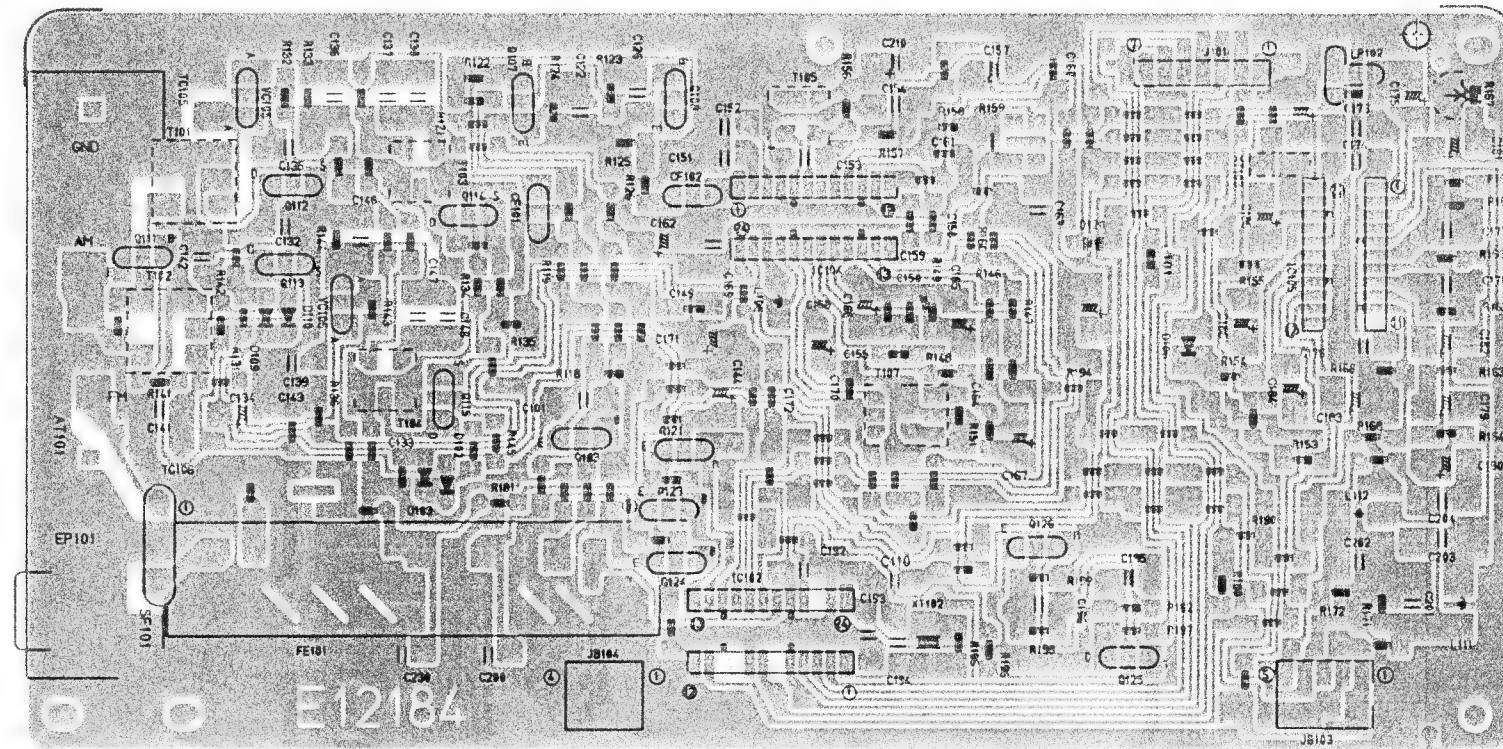


Notes:

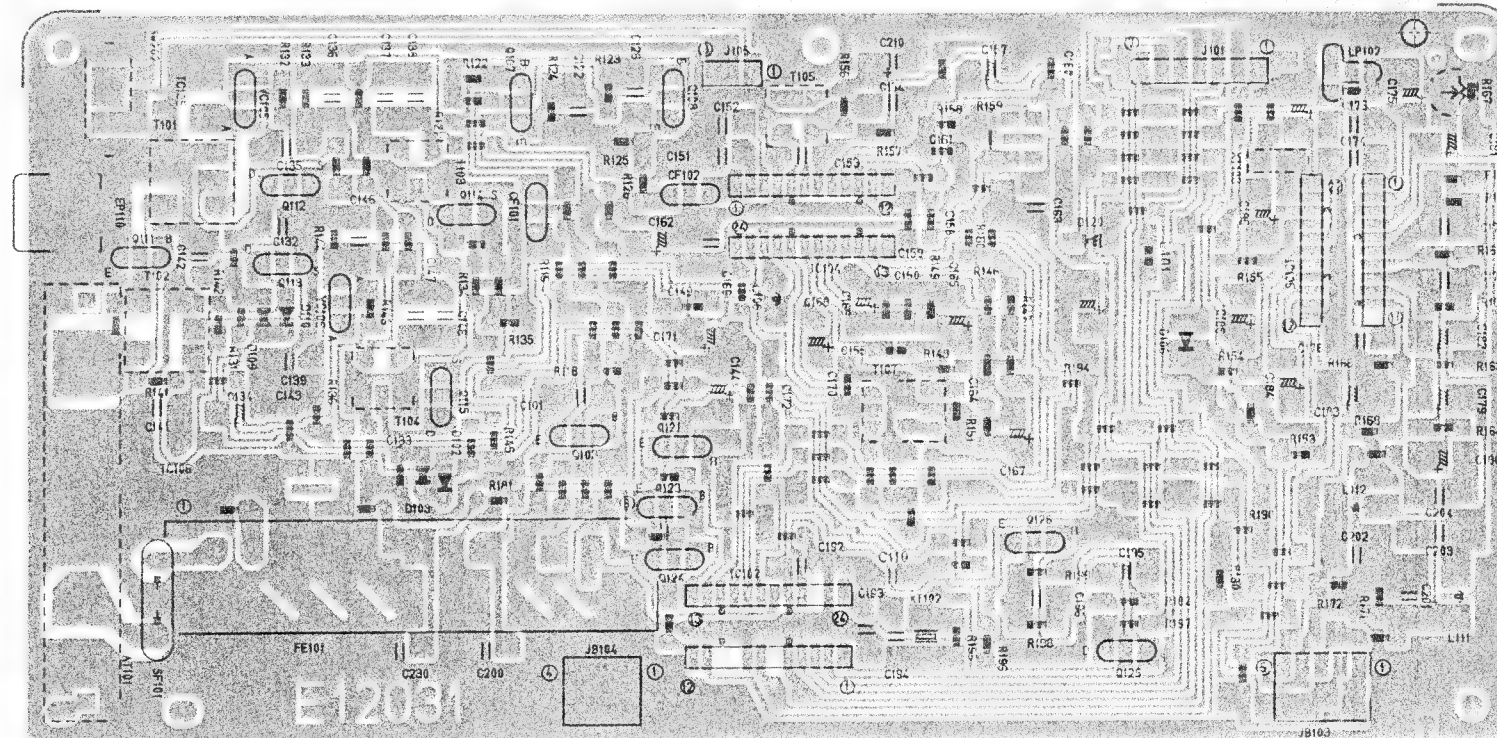
- Shows DC voltage to the chassis with no signal input.
  - indicates +B power supply.
  - indicates -B power supply.
  - indicates signal path.
  - When replacing the parts in the darkened are ( ) and those marked with  $\Delta$ , be sure to use the designated parts to ensure safety.
  - This is the standard circuit diagram.
- The design and contents are subject to change without notice.

## Printed Circuit Boards

■ Tuner PC Board (ENA-094)



(ENA-099)

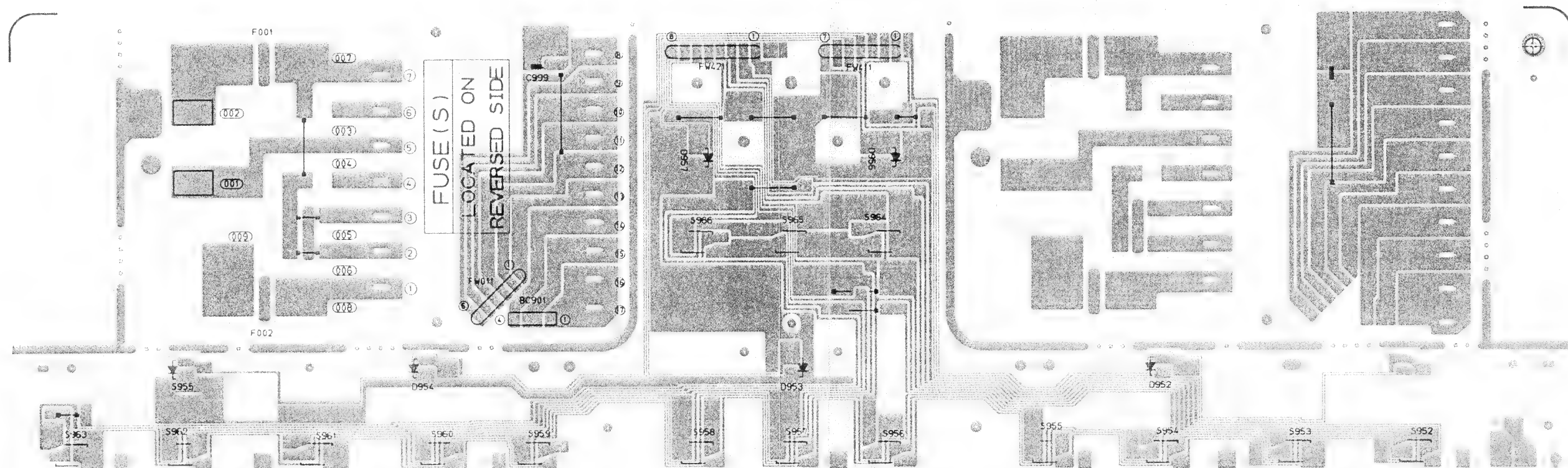


(No. 20162)

DR-E34BK	DR-E34BK
DR-E34LBK	DR-E34LBK

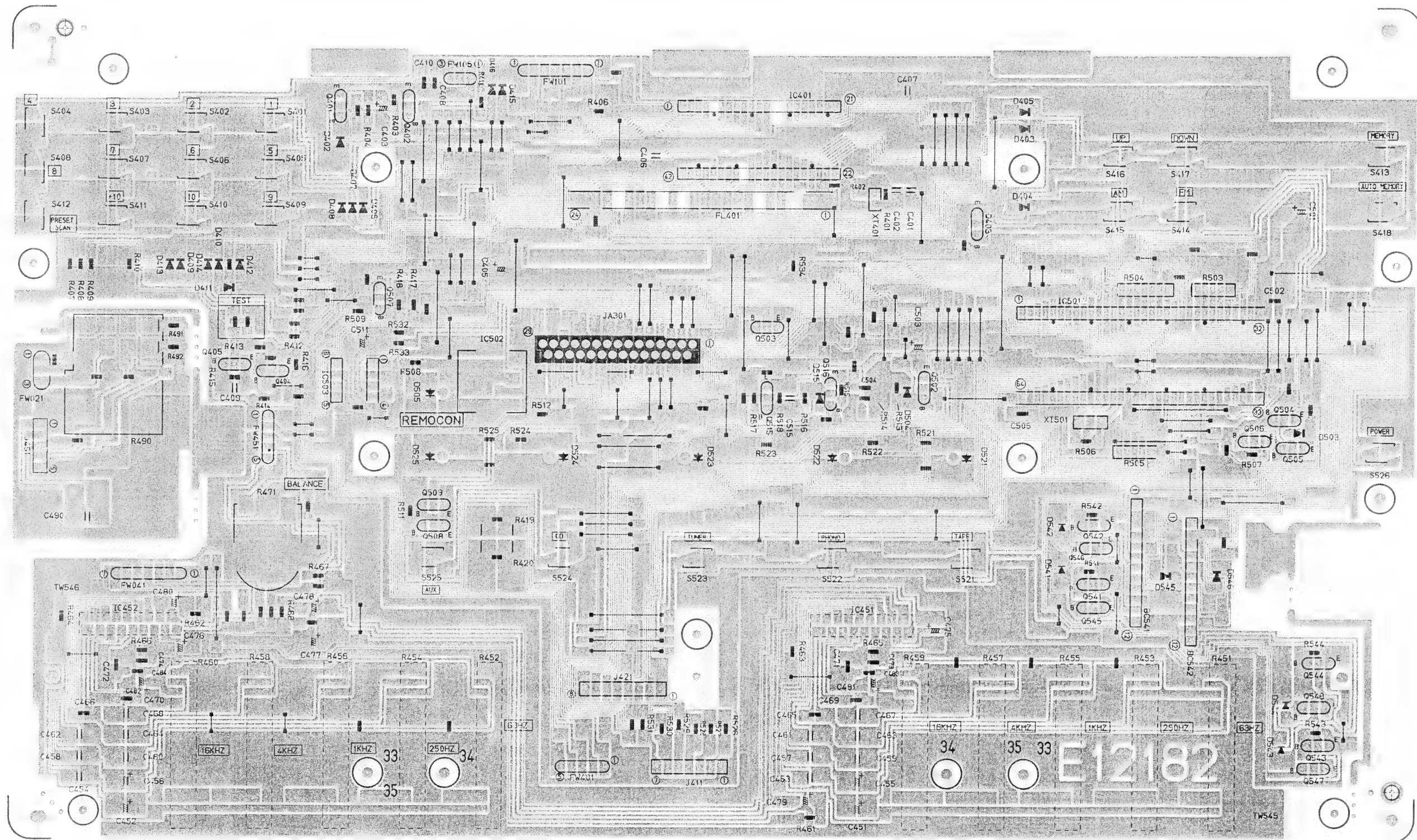
DR-E34BK  
DR-E34LBK

■ **Cassette SW and Power Primary PC Board (ENB-101)**





System Control and FL Display PC Board (ENC-073)

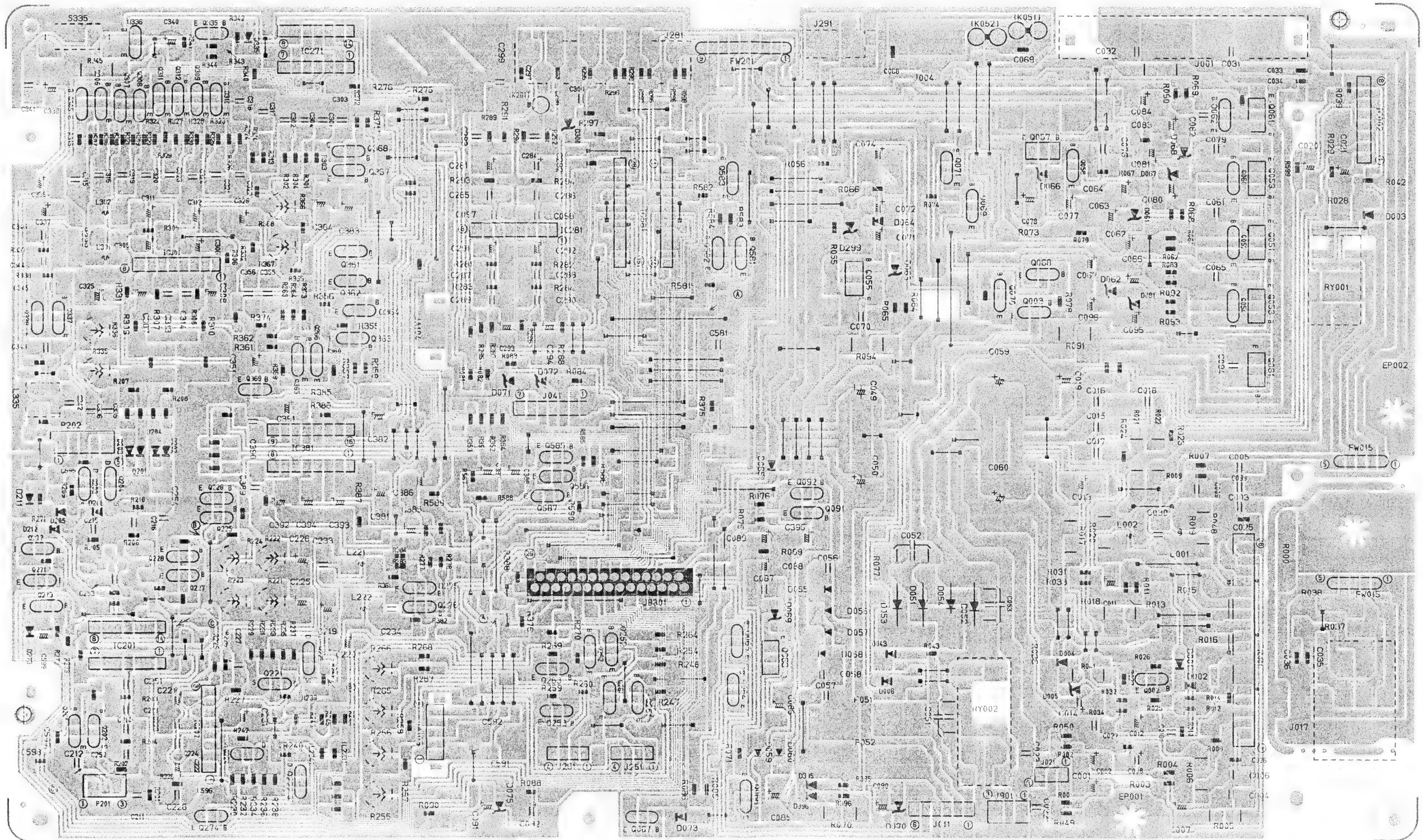




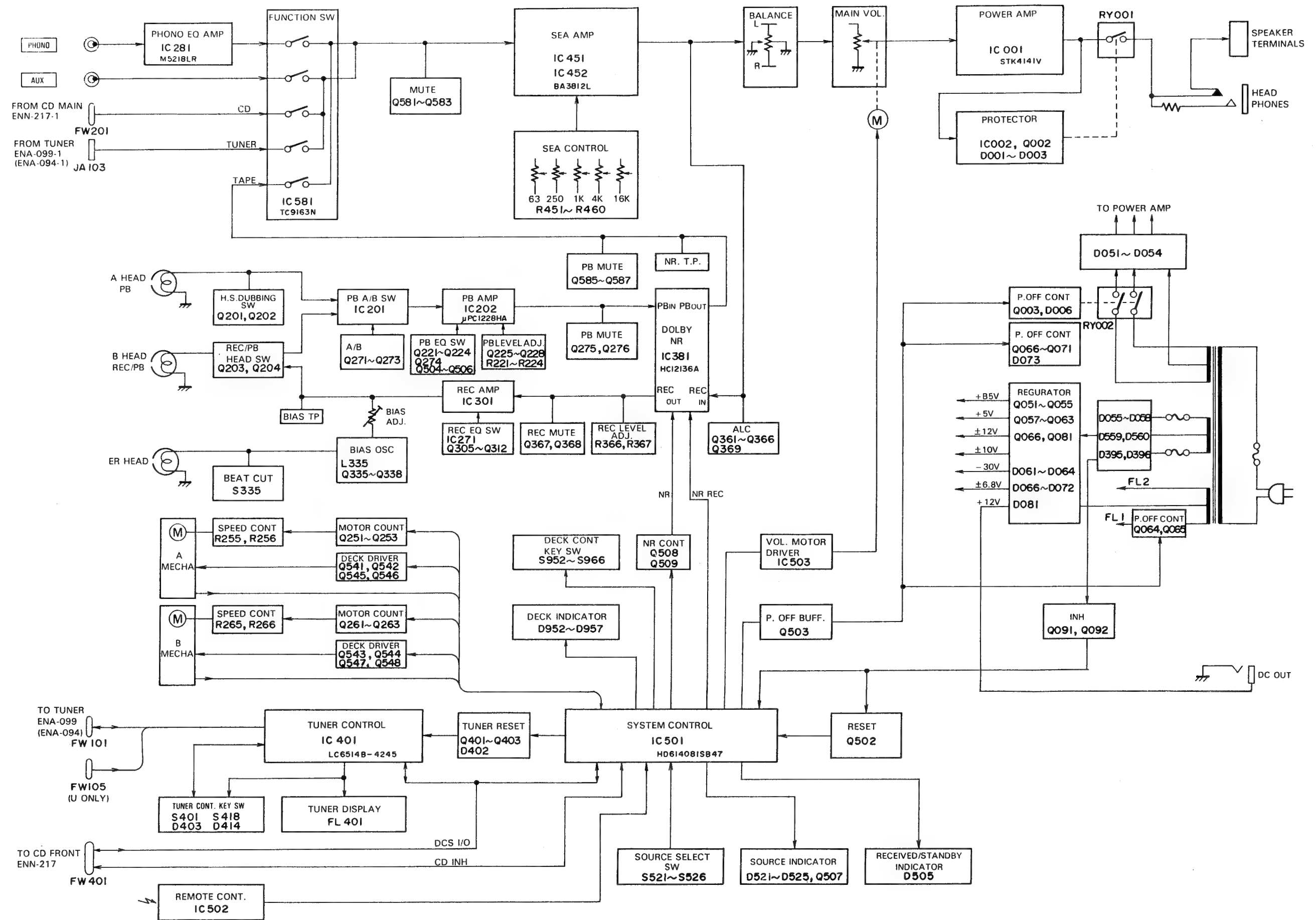
DR-E34BK  
DR-E34LBK

DR-E34BK  
DR-E34LBK

■ Cassette and AMP PC Board (ENJ-036)



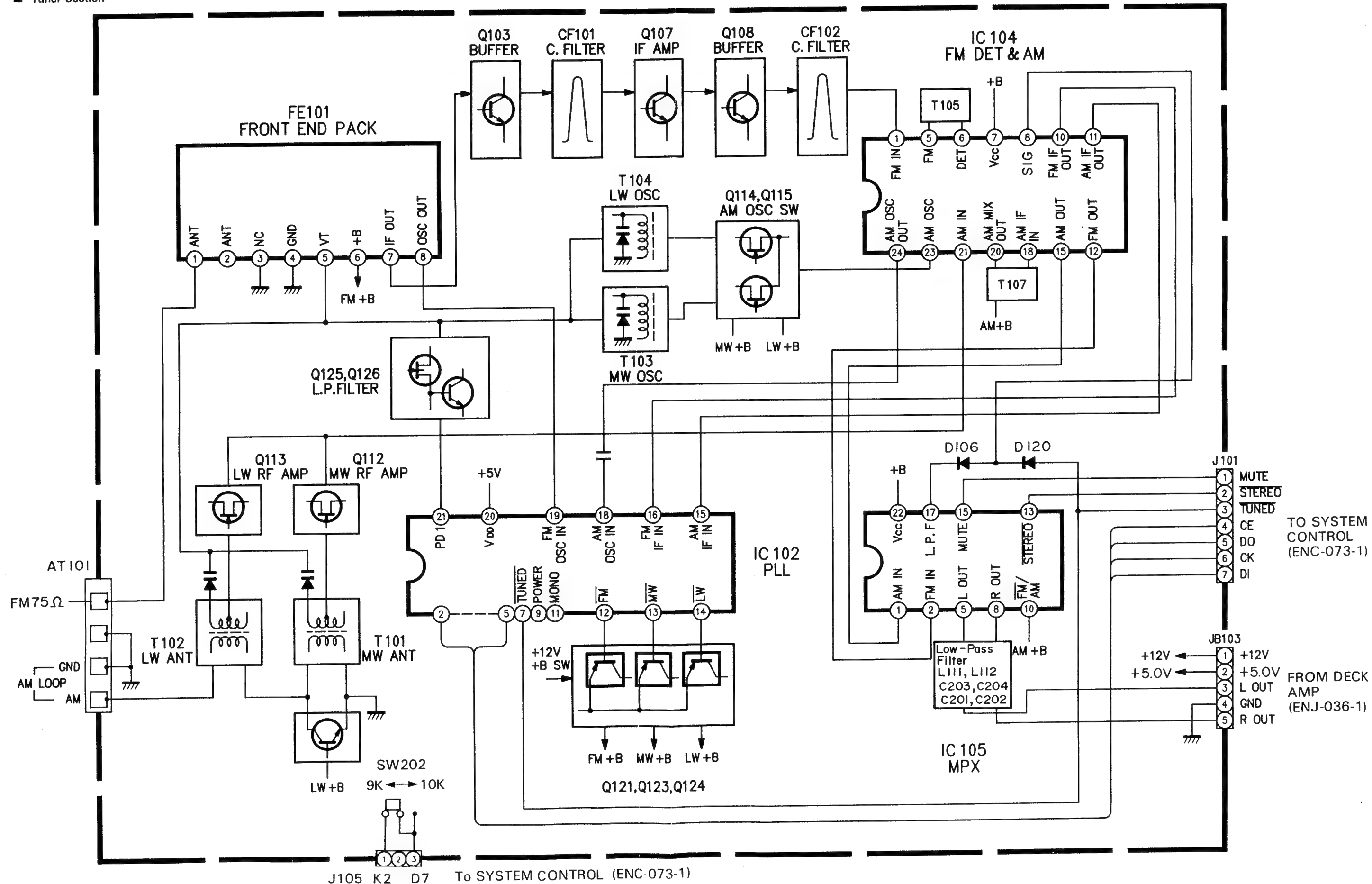
# Block Diagram ■ System Control & Audio Section



DR-E34BK  
DR-E34LBK

DR-E34BK  
DR-E34LBK

■ Tuner Section





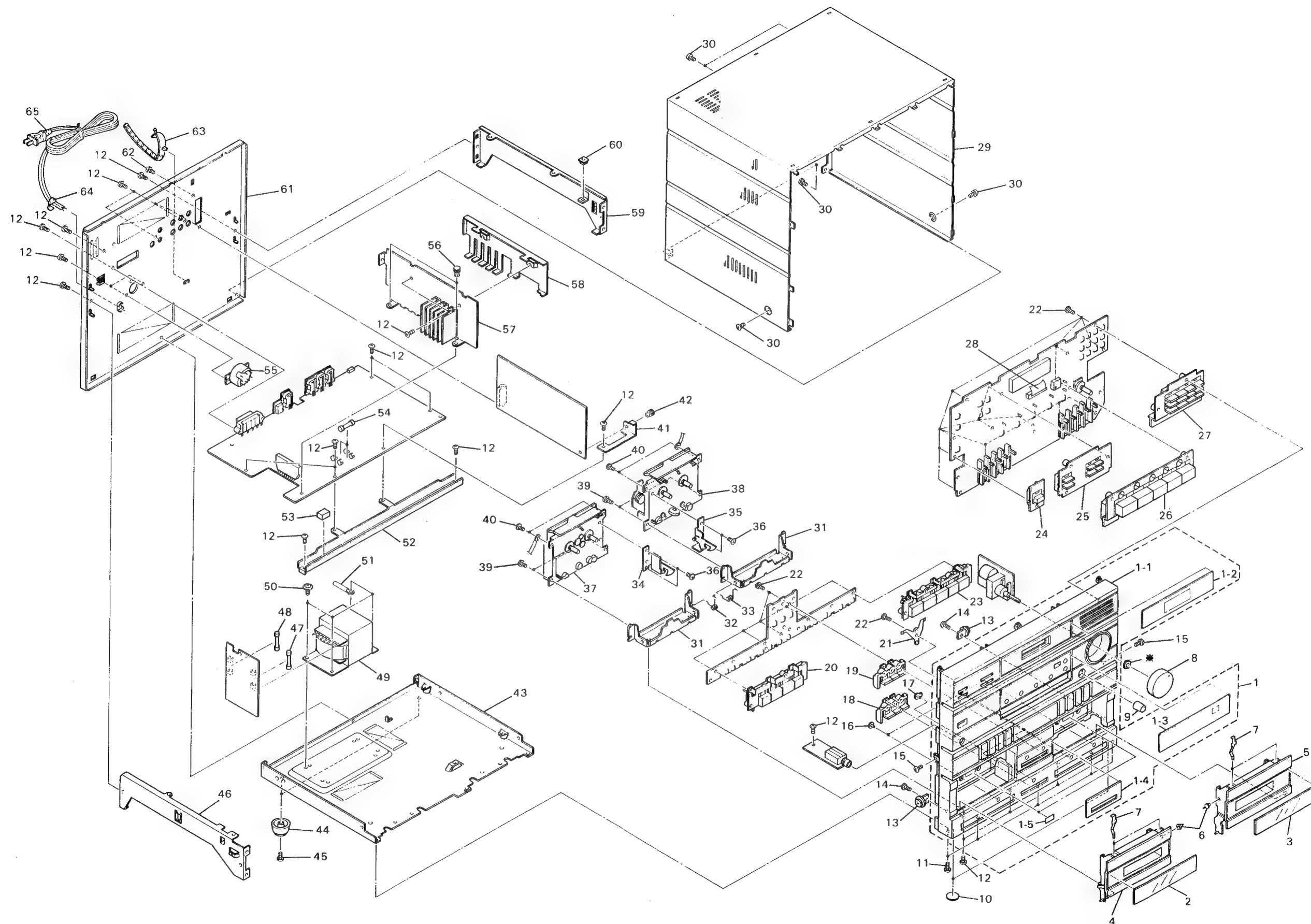
# PARTS LIST

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■ ENC-073 <input type="checkbox"/> System Control and FL Display PC Board Ass'y .....	2-18
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DR-E34BK  
DR-E34LBK

# General Exploded View and Parts List



\* mark indicates attached Part.

## ■ Parts List

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	1	FFP-DRE34BKU(S)	Front Panel Ass'y	1		A, U
	1-1	FFP-DRE34LBKE(S)	Front Panel Ass'y	1		Except A, U
		E12214-001	Front Panel	1		A, U
	1-2	E12214-002	Front Panel	1		Except A, U
		E306637-001	Tuner Window	1		
	1-3	E306639-001	Amp Window	1		
	1-4	E306645-001	Ornament	1		
	1-5	E69777-003	Reef Plate	2		
	2	E306641-001	Cassette Window	1	A	
	3	E306643-001	Cassette Window	1	B	
	4	E26644-002	Cassette Holder	1	A	
	5	E26646-004	Cassette Holder	1	B	
	6	E75600-001	Shaft	2		
	7	VKY4180-001	Holder Spring	4		
	8	E306649-001	Volume Knob	1		
	9	E74873-002	Knob	1	Balance	
	10	E75132-002	Felt Spacer	2		
	11	SDST3008M	Screw	5		
	12	SBSG3008N	Screw	22		A, LEF, LE, LBS
		SBSG3008N	Screw	23		LEV, LG, LGI
	13	SBSG3008N	Screw	24		U
	14	E305654-003	Damper Ass'y	2		
	15	SBSF3008Z	Screw	2		
	16	GBSG3008Z	Screw	2		
		E75821-001	Indicator	3	Play	
	17	E75822-001	Indicator	1	Rec	
	18	E306654-001	Push Button	1	Rec	
	19	E306654-002	Push Button	1	Dolby	
	20	E306655-001	Push Button	1	Cassette (A)	
	21	E305914-001	Leaf Spring	2		
	22	SDSF2608Z	Screw	23		
	23	E306657-001	Push Button	1	Cassette (B)	
	24	E306652-001	Push Button	1	Power	
	25	E26648-002	Push Button	1	Up / Down	
	26	E26650-001	Push Button	1	Source	
	27	E26649-002	Push Button	1	Preset	
	28	EWRIVG-25TT	FFC Cable	1		
	29	E26656-001	Metal Cover	1		
	30	SDSG3008M	Screw	6		
	31	E306661-001	Holder Bracket	2		
	32	E75906-001	Holder Spring	1	Cassette (A)	
	33	E75907-001	Holder Spring	1	Cassette (B)	
	34	E75396-001	Lock Cam	1	Left	
	35	E75397-001	Lock Cam	1	Right	
	36	SSST2606Z	Screw	4		
	37	————	Cassette Mechanism Ass'y (A)	1	See page 2-7	
	38	————	Cassette Mechanism Ass'y (B)	1	See page 2-10	
	39	SBST3006C	Screw	4		
	40	SDSF2608C	Screw	4		
	41	E75961-001	Bracket	1		
	42	E48729-007	Plastic Rivet	1		
	43	E12213-001	Chassis Base	1		
	44	E47227-030	Foot	2		
	45	SBSG3010Z	Screw	2		
	46	E306659-001	Side Bracket	1	Left	
⚠	47	QMF51E2-2R0	Fuse	1	F001	U
⚠		QMF51E2-1R0	Fuse	1	F001	Except U, LBS
⚠		QMF51E2-1R0BS	Fuse	1	F001	LBS
⚠	48	QMF51E2-1R0	Fuse	1	F002	U
⚠	49	ETP1050-22FA	Power Transformer	1		U

⚠: Safety parts

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
⚠		ETP1050-22EA	Power Transformer	1		Except U, LBS
	50	ETP1050-22EABS	Power Transformer	1		LBS
	51	E65389-002	Special Screw	4		
	52	E72018-003	Wire Clamp	1		
		E306281-001	Circuit Board Bracket	1		
⚠	53	E3400-452	Felt Spacer	1		
⚠	54	QMF51E2-1R25	Fuse	2	F051, F052	Except LBS
⚠		QMF51E2-1R2BS	Fuse	2	F051, F052	LBS
	55	QSR0085-018	Voltage Selector	1		U
	56	E48729-010	Plastic Rivet	2		
	57	E306633-001	Heat Sink	1		
	58	E306705-002	Leaf Spring	1		
	59	E306660-001	Side Bracket	1	Right	
	60	E306764-001	Fastener	1		
	61	E12248-006	Rear Panel	1		U
		E12248-007	Rear Panel	1		A
		E12248-008	Rear Panel	1		LE, LEF
		E12248-009	Rear Panel	1		LBS
		E12248-010	Rear Panel	1		LG, LEV, LGI
	—	E306019-066	Rating Label	1		U
	—	E306019-067	Rating Label	1		LEV, LGI
⚠	62	SBST3006N	Screw	1		
⚠	63	E304880-001	Cord Holder	1		
⚠	64	QHS3876-162	Cord Stopper	1		Except LBS
⚠		QHS3876-162BS	Cord Stopper	1		LBS
⚠	65	QMP2560-244	Power Cord	1		A
⚠		QMP7520-200	Power Cord	1		U
⚠		QMP3900-200	Power Cord	1		Except A, U, LBS
⚠		QMP9017-008BS	Power Cord	1		LBS
	—	E61029-005	Number Label	1		
	—	E70027-001	Approval Label	1		LE
	—	QZL1031-101	SEV Label	1		LEV
	—	E60965-001BS	Warning Label	1		LBS
	—	E74792-069	FTZ Label	1		LGI

⚠: Safety parts

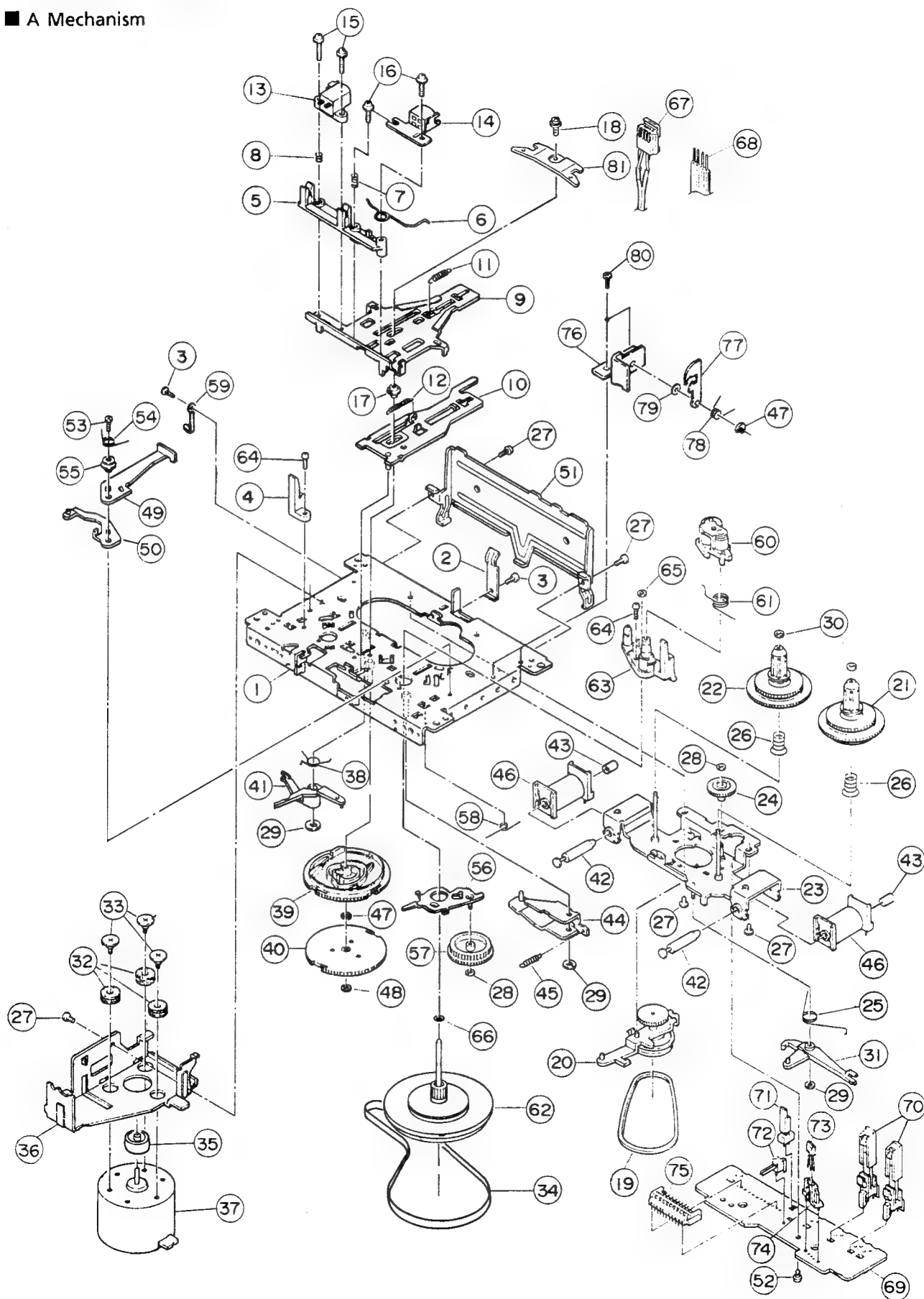
## The Marks Designated Areas

A.....Australia  
 U.....Other Countries  
 LG.....West Germany (with LW)  
 LBS.....the U.K. (with LW)

LE, LEF.....Continental Europe  
 LEV.....Switzerland (with LW)  
 LGI.....Italy (with LW)  
 No mark indicates all areas.

# Cassette Mechanism Ass'y and Parts List

## ■ A Mechanism

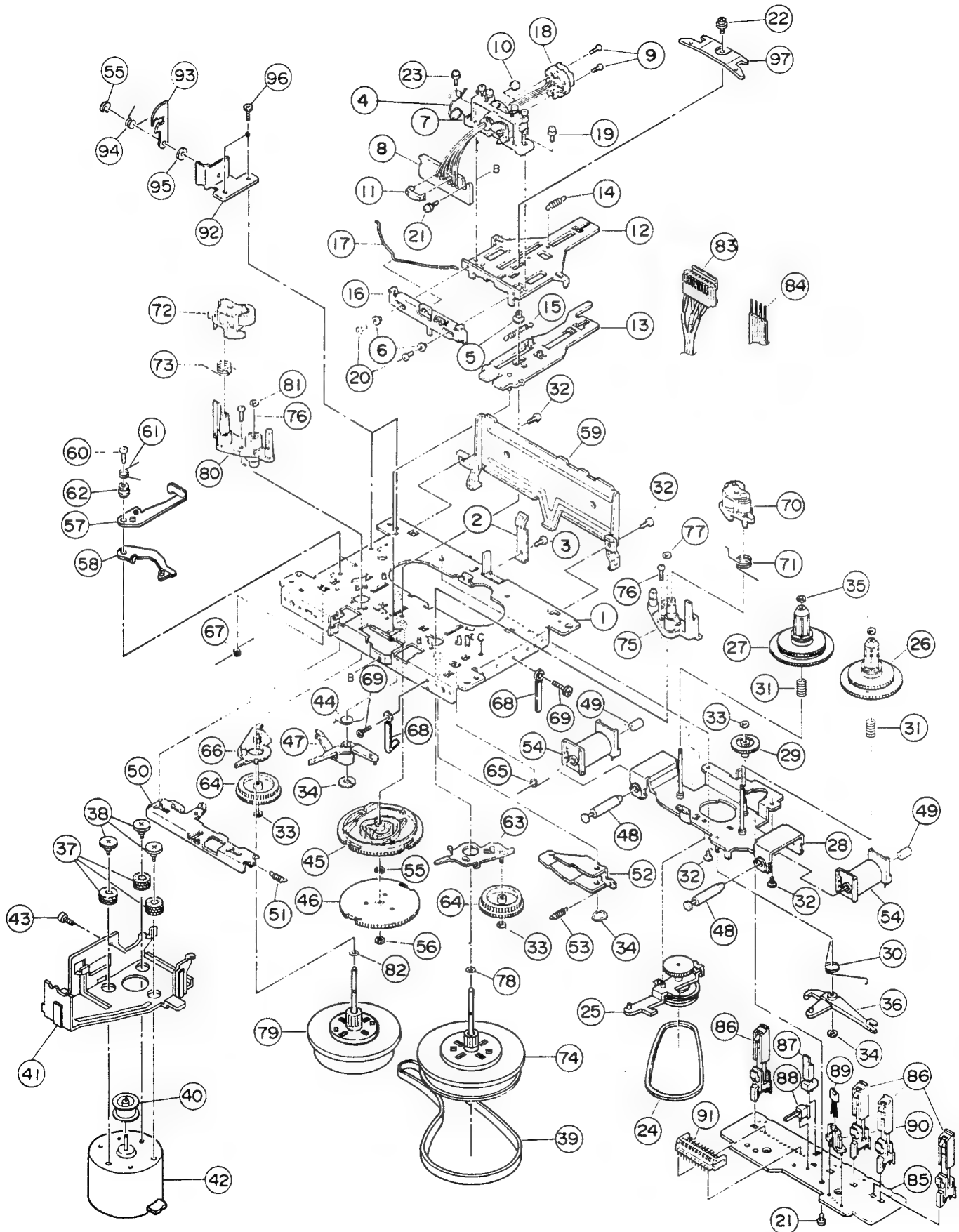


■ A Mechanism Parts List

Item	Part Number	Part Name	Q'ty	Description	Areas
1	188001503T	Chassis Ass'y	1		
2	18800102T	Pack Spring	1		
3	SPST2003Z	Screw	2		
4	18800107T	Tape Guide	1		
5	18800208T	Head Base	1		
6	18800406T	Pinch Roller Spring	1		
7	18210307T	Azimuth Spring	1		
8	18210308T	EH. Spring	1		
9	18800207T	Head Panel (A)	1		
10	188002501T	Head Panel (B) Ass'y	1		
11	18800204T	RC. Spring	1		
12	18800205T	Panel Spring	1		
13	62011303T	Head	1		
14	MS15R-AA2N1	Head	1		
15	92210000T	Screw	2		
16	92250000T	Screw	2		
17	18800219T	Panel Collar (A)	1		
18	99991816T	Screw	1		
19	18800708T	RF. Belt	1		
20	188007304T	RF. Clutch Ass'y	1		
21	188005301T	T. Reel Ass'y (F)	1		
22	188005302T	T. Reel Ass'y (R)	1		
23	188005501T	Reel Base Ass'y	1		
24	18800508T	FF Gear	1		
25	18800517T	FR. Trigger Arm Spring	1		
26	18800522T	B.T. Spring (R)	2		
27	SPST2004Z	Screw	5		
28	94210000T	P. Washer Cut	2		
29	99997004T	HL. Washer Cut	3		
30	99997003T	HL. Washer Cut	2		
31	18800515T	RF. Trigger Arm	1		
32	18211266T	Motor Rubber	3		
33	18511418T	Motor Collar Screw	3		
34	18800944T	Main Belt	1		
35	18800937T	Motor Pulley	1		
36	18800911T	Motor Bracket	1		
37	60050342T	Motor	1		
38	18800106T	M. Trigger Arm Spring	1		
39	18802115T	M. Gear	1		
40	18802116T	RF. Cam Gear	1		
41	18802103T	M. Trigger Arm	1		
42	18802105T	Plunger	2		
43	18802106T	Plunger Holder	2		
44	188021503T	P. Kick Lever Ass'y	1		
45	18802111T	P.K. Lever Spring	1		
46	18802113T	Solenoid	2		
47	REE2000	E. Washer	2		
48	99997006T	HL. Washer Cut	1		
49	18801316T	E. Stopper A (F)	1		
50	18801302T	E. Stopper B (F)	1		
51	18805302T	SW. Protector	1		
52	99992020T	Screw	1		
53	99850000T	Screw	1		
54	18801320T	E. Stopper Spring (F)	1		
55	18801305T	E. Stopper Collar	1		
56	188005502T	T. Gear Arm (F) Ass'y	1		
57	18800536T	T. Gear	1		
58	18800518T	T.G. Arm(F) Spring	1		
59	11140302T	Wire Clamp	1		
60	188004309T	Pinch Roller Arm (F) Ass'y	1		

Item	Part Number	Part Name	Q'ty	Description	Areas
61	18800403T	P. Arm (F) Spring	1		
62	188009307T	Flywheel (F) Ass'y	1		
63	18800908T	FL. Metal Ass'y (F)	1		
64	SPST2006Z	Screw	2		
65	99997007T	HL. Washer Cut	1		
66	99996009T	HL. Washer	1		
67	EWS243-023T	SKT Wire Ass'y	1		
68	EWR34D-30LS	Flat Wire	1		
69	18805347T	Circuit Board	1		
70	640101173T	Leaf Switch	2		
71	640101174T	Leaf Switch	1		
72	640101175T	Leaf Switch	1		
73	LB9050	Hall IC	1		
74	18805303T	IC Protector	1		
75	68150205T	Connector	1		
76	VKL5501-00B	Lock Bracket Ass'y	1		
77	VKL5342-003	Lock Cam (A)	1		
78	VKW3006-073	Spring	1		
79	Q03093-115	Washer	1		
80	SSST2605Z	Screw	2		
81	18800216T	Panel Spring Plate	1		

■ B Mechanism





## ■ B Mechanism Parts List

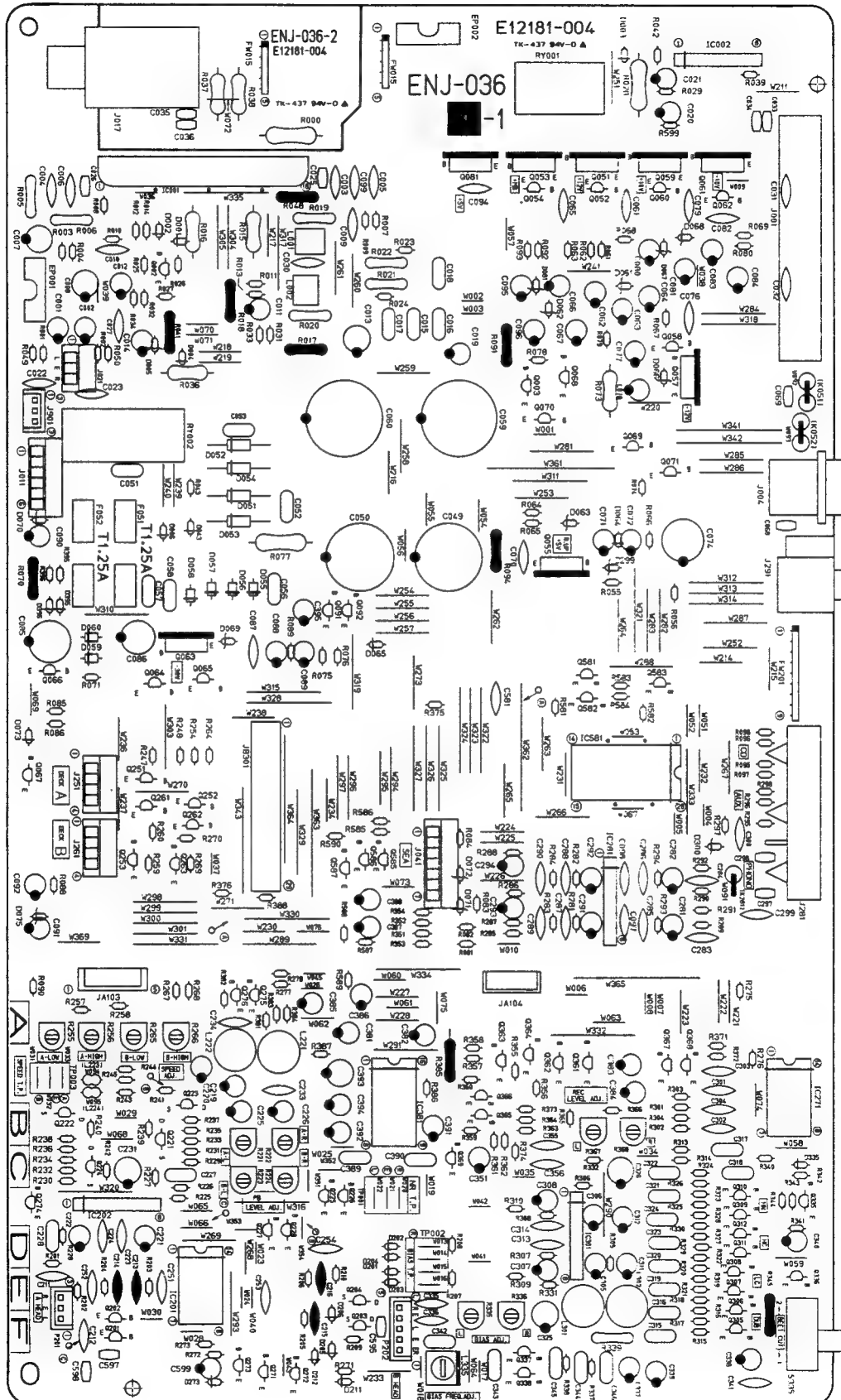
Item	Part Number	Part Name	Q'ty	Description	Areas
1	188001503T	Chassis Ass'y	1		
2	18800102T	Pack Spring	1		
3	SPST2003Z	Screw	1		
4	18650260T	Clamper Spring (V)	1		
5	18800219T	Panel Collar	1		
6	18650228T	Chp Lever Collar	2		
7	186502306T	Head Base Ass'y	1		
8	18800234T	Relay Board	1		
9	99991802T	Head Collar Screw (S)	2		
10	18650961T	Spacer	1		
11	18650249T	Wire Clamp	1		
12	18800201T	Head Panel (A)	1		
13	188002501T	Head Panel (B) Ass'y	1		
14	18800204T	RC. Spring	1		
15	18800205T	Panel Spring	1		
16	18800206T	Chp Lever	1		
17	18800405T	Pinch Roller Spring	1		
18	62020604T	Head	1		
19	LPSP2005Z	Tams Screw	1		
20	95470000T	Screw	2		
21	99992020T	Screw	2		
22	99991816T	Screw	1		
23	SDSP2005Z	Bind Screw	1		
24	18800708T	RF. Belt	1		
25	188007304T	RF. Clutch Ass'y	1		
26	188005301T	T. Reel Ass'y (F)	1		
27	188005302T	T. Reel Ass'y (R)	1		
28	188005501T	Reel Base Ass'y	1		
29	18800508T	FF Gear	1		
30	18800517T	FR. Trigger Arm Spring	1		
31	18800522T	B.T. Spring (R)	2		
32	SPST2004Z	Screw	4		
33	94210000T	P. Washer Cut	3		
34	99997004T	HL. Washer Cut	3		
35	99997003T	HL. Washer Cut	2		
36	18800515T	RF. Trigger Arm	1		
37	18211266T	Motor Rubber	3		
38	18511418T	Motor Collar Screw	3		
39	18800938T	Main Belt	1		
40	18800937T	Motor Pulley	1		
41	18800911T	Motor Bracket	1		
42	60050342T	Motor	1		
43	LPSP2004Z	Tams Screw	1		
44	18800106T	M. Trigger Arm Spring	1		
45	18802115T	M. Gear	1		
46	18802116T	RF. Cam Gear	1		
47	18802103T	M. Trigger Arm	1		
48	18802105T	Plunger	2		
49	18802106T	Plunger Holdr	2		
50	188021501T	CH. Slide Lever Ass'y	1		
51	18802108T	CH. Slide Lever Spring	1		
52	188021503T	P. Kick Lever Ass'y	1		
53	18802111T	P.K. Lever Spring	1		
54	18802113T	Solenoid	2		
55	REE2000	E. Washer	2		
56	99997006T	HL. Washer Cut	1		
57	18801317T	E. Stopper A (R)	1		
58	18801307T	E. Stopper B (R)	1		
59	18805302T	SW. Protector	1		
60	99991404T	Screw	1		

Item	Part Number	Part Name	Q'ty	Description	Areas
61	18801321T	E. Stopper Spring (F)	1		
62	18801305T	E. Stopper Collor	1		
63	188005502T	T. Gear Arm (F) Ass'y	1		
64	18800536T	T. Gear	2		
65	18800518T	T.G. Arm (F) Spring	1		
66	188005503T	T. Gear Arm (R) Ass'y	1		
67	18800519T	T.G. Arm (R) Spring	1		
68	11140302T	Wire Clamp	2		
69	SPST2003Z	Screw	2		
70	188004309T	Pinch RollerArm (F) Ass'y	1		
71	18800403T	P. Arm (F) Spring	1		
72	188004310T	Pinch Roller Arm (R) Ass'y	1		
73	18800404T	P. Arm (R) Spring	1		
74	188009307T	Flywheel (F) Ass'y	1		
75	18800908T	FL Metal Ass'y (F)	1		
76	SPST2006Z	Screw	2		
77	99997007T	HL. Washer Cut	1		
78	99996003T	HL. Washer	1		
79	188009308T	Flywheel (R) Ass,y	1		
80	18800909T	FL. Metal Ass'y (R)	1		
81	99997006T	HL. Washer Cut	1		
82	99996002T	HL. Washer	1		
83	EWS245-002T	SKT Wire Ass'y	1		
84	EWR34D-25LS	Flat Wire	1		
85	18805347T	Circuit Board Ass'y	1		
86	640101173T	Leaf Switch	4		
87	640101174T	Leaf Switch	1		
88	640101175T	Leaf Switch	1		
89	L89050	Hall IC	1		
90	18805303T	IC Protector	1		
91	68150206T	Connector	1		
92	VKL5500-00B	Lock Bracket Ass'y	1		
93	VKL5345-003	Lock Cam (B)	1		
94	VKW3006-074	Spring	1		
95	Q03093-115	Washer	1		
96	SSST2605Z	Screw	2		
97	18800216T	Panel Spring Plate	1		

# Printed Circuit Board Ass'y and Parts List

■ ENJ-036 □ Cassette and Power Amplifier PC Board Ass'y

Note: ENJ-036 □ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENJ-036 	Australia , Other Countries , Continental Europe (with LW) , the U.K.(with LW) , Switzerland (with LW)
ENJ-036 	West Germany (with LW) , Italy (with LW)

I.C.s

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC001	STK4141MK5	I.C. SANYO	
	IC002	UPC1237HA	I.C. NEC	
	IC201	TC4066BP	I.C. TOSHIBA	
	IC202	UPC1228HA	I.C. NEC	
	IC271	TC4001BP	I.C. TOSHIBA	
	IC281	M5218L-R	I.C. MITSUBISHI	
	IC301	BA15218N	I.C. ROHM	
	IC381	HA12136A	I.C. HITACHI	
	IC581	TC9163N	I.C. TOSHIBA	

Transistors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q002	2SC1685(Q,R)	SILICON MATSUSHITA	
	Q003	2SC1740S(R,S)	SILICON ROHM	
	Q051	2SD2061(E,F)	SILICON ROHM	
	Q052	2SC1685(R,S)	SILICON MATSUSHITA	
	Q053	2SD2061(E,F)	SILICON ROHM	
	Q054	2SC1685(R,S)	SILICON MATSUSHITA	
	Q055	2SD2061(E,F)	SILICON ROHM	
	Q057	2SB1187(E,F)	SILICON ROHM	
	Q058	2SA564A(R,S)	SILICON MATSUSHITA	
	Q063	2SB1187(E,F)	SILICON ROHM	
	Q064	2SD2144S(VW)	SILICON ROHM	
	Q065	2SD2144S(VW)	SILICON ROHM	
	Q066	DTA144ES	SILICON ROHM	
	Q067	DTA144ES	SILICON ROHM	
	Q068	DTA144ES	SILICON ROHM	
	Q069	DTA144ES	SILICON ROHM	
	Q070	DTA144ES	SILICON ROHM	
	Q071	DTA144ES	SILICON ROHM	
	Q081	2SD2061(E,F)	SILICON ROHM	
	Q091	DTA144YS	SILICON ROHM	
	Q092	DTA144YS	SILICON ROHM	
	Q201	DTA144ES	SILICON ROHM	
	Q202	DTA144ES	SILICON ROHM	
	Q203	2SK373(O,Y)	F.E.T. TOSHIBA	
	Q204	2SK373(O,Y)	F.E.T. TOSHIBA	
	Q221	2SK301(P,Q)	F.E.T. MATSUSHITA	
	Q222	2SK301(P,Q)	F.E.T. MATSUSHITA	
	Q223	2SK301(P,Q)	F.E.T. MATSUSHITA	
	Q224	2SK301(P,Q)	F.E.T. MATSUSHITA	
	Q225	DTA144YS	SILICON ROHM	
	Q226	DTA144YS	SILICON ROHM	
	Q227	DTA144YS	SILICON ROHM	
	Q228	DTA144YS	SILICON ROHM	
	Q251	2SC3377(Q,R)	SILICON ROHM	
	Q252	2SC1740S(R,S)	SILICON ROHM	
	Q253	2SA933S(R,S)	SILICON ROHM	
	Q261	2SC3377(Q,R)	SILICON ROHM	
	Q262	2SC1740S(R,S)	SILICON ROHM	
	Q263	2SA933S(R,S)	SILICON ROHM	
	Q271	DTA144ES	SILICON ROHM	
	Q272	DTA144ES	SILICON ROHM	
	Q273	DTA144ES	SILICON ROHM	
	Q274	DTA144ES	SILICON ROHM	
	Q275	2SD2144S(VW)	SILICON ROHM	
	Q276	2SD2144S(VW)	SILICON ROHM	
	Q305	DTA144TS	SILICON ROHM	
	Q306	DTA144TS	SILICON ROHM	
	Q307	DTA144TS	SILICON ROHM	
	Q308	DTA144TS	SILICON ROHM	
	Q309	DTA144TS	SILICON ROHM	
	Q310	DTA144TS	SILICON ROHM	
	Q311	DTA144TS	SILICON ROHM	
	Q312	DTA144TS	SILICON ROHM	
	Q335	2SC1685(Q,R)	SILICON MATSUSHITA	
	Q336	2SC1685(Q,R)	SILICON MATSUSHITA	
	Q337	2SC1740S(R,S)	SILICON ROHM	
	Q338	2SC1740S(R,S)	SILICON ROHM	
	Q361	2SC1740S(R,S)	SILICON ROHM	
	Q362	2SC1740S(R,S)	SILICON ROHM	
	Q363	2SC1740S(R,S)	SILICON ROHM	
	Q364	2SC1740S(R,S)	SILICON ROHM	
	Q365	2SC1740S(R,S)	SILICON ROHM	
	Q366	2SC1740S(R,S)	SILICON ROHM	
	Q367	2SD2144S(VW)	SILICON ROHM	
	Q368	2SD2144S(VW)	SILICON ROHM	
	Q369	DTA144ES	SILICON ROHM	
	Q581	2SD2144S(VW)	SILICON ROHM	
	Q582	2SD2144S(VW)	SILICON ROHM	
	Q583	DTA144ES	SILICON ROHM	
	Q585	2SD2144S(VW)	SILICON ROHM	
	Q586	2SD2144S(VW)	SILICON ROHM	
	Q587	DTA144ES	SILICON ROHM	

Diodes

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	D001	1SS133	SILICON ROHM	
	D002	1SS133	SILICON ROHM	
	D003	1SS133	SILICON ROHM	
	D004	1SS133	SILICON ROHM	
	D005	MTZ15JC	ZENER ROHM	
	D006	1SS133	SILICON ROHM	
	D043	1SS119	SILICON HITACHI	
	D051	ERB12-02RKL1	SILICON KYOUDOU	
	D052	ERB12-02RKL1	SILICON KYOUDOU	
	D053	ERB12-02RKL1	SILICON KYOUDOU	
	D054	ERB12-02RKL1	SILICON KYOUDOU	
	D055	1SR139-200	SILICON ROHM	
	D056	1SR139-200	SILICON ROHM	
	D057	1SR139-200	SILICON ROHM	
	D058	1SR139-200	SILICON ROHM	
	D059	1SR139-200	SILICON ROHM	
	D060	1SR139-200	SILICON ROHM	
	D061	MTZ13JC	ZENER ROHM	
	D062	MTZ13JC	ZENER ROHM	
	D063	MTZ6.2JC	ZENER ROHM	
	D064	1SS133	SILICON ROHM	
	D065	1SS133	SILICON ROHM	
	D066	MTZ13JC	ZENER ROHM	
	D069	MTZ30JC	ZENER ROHM	
	D070	MTZ5.1JB	ZENER ROHM	
	D071	MTZ6.8JC	ZENER ROHM	
	D072	MTZ6.8JC	ZENER ROHM	
	D073	1SS133	SILICON ROHM	
	D075	MTZ5.1JB	ZENER ROHM	
	D081	MTZ5.6JC	ZENER ROHM	
	D201	1SS133	SILICON ROHM	
	D202	1SS133	SILICON ROHM	
	D203	1SS133	SILICON ROHM	
	D204	1SS133	SILICON ROHM	
	D205	1SS133	SILICON ROHM	
	D206	1SS133	SILICON ROHM	
	D211	1SS133	SILICON ROHM	
	D212	1SS133	SILICON ROHM	
	D273	1SS133	SILICON ROHM	
	D299	MTZ5.6JC	ZENER ROHM	
	D300	MTZ5.6JC	ZENER ROHM	
	D335	1SS133	SILICON ROHM	
	D395	1SS133	SILICON ROHM	
	D396	1SS133	SILICON ROHM	

Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	C001	EEZ1005-106	10MF 100V ELECTRO	
	C002	EEZ1005-106	10MF 100V ELECTRO	
	C003	QCS21HJ-101	100PF 50V CERAMIC	
	C004	QCS21HJ-101	100PF 50V CERAMIC	
	C005	QCS21HJ-820	82PF 50V CERAMIC	C
	C005	QCS21HJ-151	150PF 50V CERAMIC	D
	C006	QCS21HJ-820	82PF 50V CERAMIC	C
	C006	QCS21HJ-151	150PF 50V CERAMIC	D
	C007	EEZ2505-107	100MF ELECTRO	
	C008	EEZ2505-107	100MF ELECTRO	
	C009	QCS21HJ-5R0	5PF 50V CERAMIC	
	C010	QCS21HJ-5R0	5PF 50V CERAMIC	
	C011	QETB1HM-226	22MF 50V ELECTRO	
	C012	QETB1HM-226	22MF 50V ELECTRO	
	C013	QETB1HM-476	47MF 50V ELECTRO	
	C014	QETB1CM-226	22MF 16V ELECTRO	
	C015	QFLC1HK-104	0.1MF 50V CERAMIC	
	C016	QFLC1HK-104	0.1MF 50V CERAMIC	
	C017	QFLC1HK-104	0.1MF 50V CERAMIC	
	C018	QFLC1HK-104	0.1MF 50V CERAMIC	
	C019	QETB1HM-475	47MF 50V ELECTRO	
	C020	QETB1CM-226	22MF 16V ELECTRO	
	C021	QETB1AM-476	47MF 10V ELECTRO	
	C022	QCF21HP-103	0.01MF 50V CERAMIC	C
	C022	QCY21HK-472	4700PF 50V CERAMIC	D

## Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	C023	QCF21HP-473	0.047MF 50V CERAMIC	
	C025	QCSB1HJ-470	47PF 50V CERAMIC	D
	C026	QCSB1HJ-470	47PF 50V CERAMIC	D
	C027	QCS21HJ-101	100PF 50V CERAMIC	D
	C030	QCS21HJ-101	100PF 50V CERAMIC	D
	C031	QCY21HK-222	2200PF 50V CERAMIC	D
	C032	QCY21HK-222	2200PF 50V CERAMIC	D
	C035	QCB81HK-471	470PF 50V CERAMIC	D
	C036	QCB81HK-471	470PF 50V CERAMIC	D
	C049	QETB1VM-228N	2200MF 35V ELECTRO	
	C050	QETB1VM-228N	2200MF 35V ELECTRO	
	C051	QFN82AK-103	0.01MF 100V MYLAR	C
	C051	QFN82AK-104	0.1MF 100V MYLAR	D
	C052	QFN82AK-103	0.01MF 100V MYLAR	C
	C052	QFN82AK-104	0.1MF 100V MYLAR	D
	C053	QFN82AK-103	0.01MF 100V MYLAR	C
	C053	QFN82AK-104	0.1MF 100V MYLAR	D
	C056	QFN82AK-103	0.01MF 100V MYLAR	
	C057	QFN82AK-103	0.01MF 100V MYLAR	
	C058	QFN82AK-103	0.01MF 100V MYLAR	
	C059	EET4201-338	3300MF ELECTRO	
	C060	EET4201-338	3300MF ELECTRO	
	C061	QCF21HP-103	0.01MF 50V CERAMIC	
	C062	QETB1EM-476	47MF 25V ELECTRO	
	C063	QETB1CM-476	47MF 16V ELECTRO	
	C064	QETB1CM-476	47MF 16V ELECTRO	
	C065	QCF21HP-103	0.01MF 50V CERAMIC	
	C066	QETB1CM-476	47MF 16V ELECTRO	
	C067	QETB1CM-476	47MF 16V ELECTRO	
	C068	QCB81HK-471	470PF 50V CERAMIC	D
	C069	QCVB1CM-103	0.01MF 16V CERAMIC	D
	C070	QCF21HP-103	0.01MF 50V CERAMIC	
	C071	QETB1AM-476	47MF 10V ELECTRO	
	C072	QETB1AM-476	47MF 10V ELECTRO	
	C074	QETB0JM-108	1000MF 6.3V ELECTRO	
	C076	QCF21HP-103	0.01MF 50V CERAMIC	
	C077	QETB1CM-476	47MF 16V ELECTRO	
	C078	QETB1CM-476	47MF 16V ELECTRO	
	C085	QETB1JM-107	100MF 63V ELECTRO	
	C086	QETB1JM-476	47MF 63V ELECTRO	
	C087	QCF21HP-103	0.01MF 50V CERAMIC	
	C088	QETB1HM-226	22MF 50V ELECTRO	
	C089	QETB1HM-226	22MF 50V ELECTRO	
	C090	QETB1HM-475	4.7MF 50V ELECTRO	
	C091	QETB1CM-476	47MF 16V ELECTRO	
	C092	QETB1AM-476	47MF 10V ELECTRO	
	C094	QCF21HP-103	0.01MF 50V CERAMIC	
	C095	QETB1AM-476	47MF 10V ELECTRO	
	C096	QETB1AM-476	47MF 10V ELECTRO	
	C097	QCF21HP-473	0.047MF 50V CERAMIC	D
	C098	QCF21HP-473	0.047MF 50V CERAMIC	D
	C099	QCY21HK-472	4700PF 50V CERAMIC	D
	C211	QCS21HJ-221	220PF 50V CERAMIC	
	C212	QCS21HJ-221	220PF 50V CERAMIC	
	C213	QCS21HJ-331	330PF 50V CERAMIC	
	C214	QCS21HJ-331	330PF 50V CERAMIC	
	C215	QCS21HJ-391	390PF 50V CERAMIC	
	C216	QCS21HJ-391	390PF 50V CERAMIC	
	C219	QETB1HM-105	1MF 50V ELECTRO	
	C220	QETB1HM-105	1MF 50V ELECTRO	
	C221	QETB1HM-225	2.2MF 50V ELECTRO	
	C222	QETB1HM-225	2.2MF 50V ELECTRO	
	C223	QCS21HJ-101	100PF 50V CERAMIC	
	C224	QCS21HJ-101	100PF 50V CERAMIC	
	C225	QETB1CM-476	47MF 16V ELECTRO	
	C226	QETB1CM-476	47MF 16V ELECTRO	
	C227	QFLC1HJ-822	8200PF 50V CERAMIC	
	C228	QFLC1HJ-822	8200PF 50V CERAMIC	
	C231	QETB1CM-107	100MF 16V ELECTRO	
	C233	QCS21HJ-101	100PF 50V CERAMIC	
	C234	QCS21HJ-101	100PF 50V CERAMIC	
	C251	QCS21HJ-331	330PF 50V CERAMIC	
	C252	QCS21HJ-331	330PF 50V CERAMIC	
	C253	QCY21HK-102	1000PF 50V CERAMIC	
	C254	QCY21HK-102	1000PF 50V CERAMIC	
	C281	QETB1HM-225	2.2MF 50V ELECTRO	
	C282	QETB1HM-225	2.2MF 50V ELECTRO	
	C283	QCS21HJ-101	100PF 50V CERAMIC	C
	C283	QCS21HJ-221	220PF 50V CERAMIC	D
	C284	QCS21HJ-101	100PF 50V CERAMIC	C
	C284	QCS21HJ-221	220PF 50V CERAMIC	D
	C285	QCS21HJ-101	100PF 50V CERAMIC	
	C286	QCS21HJ-101	100PF 50V CERAMIC	
	C287	QCY21HK-682	6800PF 50V CERAMIC	
	C288	QCY21HK-682	6800PF 50V CERAMIC	
	C289	QCY21HK-182	1800PF 50V CERAMIC	
	C290	QCY21HK-182	1800PF 50V CERAMIC	
	C291	QETB1EM-226	22MF 25V ELECTRO	
	C292	QETB1EM-226	22MF 25V ELECTRO	
	C293	QETB1HM-225	2.2MF 50V ELECTRO	
	C294	QETB1HM-225	2.2MF 50V ELECTRO	
	C297	QCB81HK-221	220PF 50V CERAMIC	D
	C298	QCB81HK-221	220PF 50V CERAMIC	D
	C299	QCF21HP-103	0.01MF 50V CERAMIC	C
	C299	QCF21HP-473	0.047MF 50V CERAMIC	D

## Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	C300	QCF21HP-103	0.01MF 50V CERAMIC	
	C301	QCF21HP-473	0.047MF 50V CERAMIC	
	C302	QCF21HP-473	0.047MF 50V CERAMIC	
	C303	QCY21HK-122	1200PF 50V CERAMIC	
	C304	QCY21HK-122	1200PF 50V CERAMIC	
	C305	QETB1HM-225	2.2MF 50V ELECTRO	
	C306	QETB1HM-225	2.2MF 50V ELECTRO	
	C307	QETB1HM-225	2.2MF 50V ELECTRO	
	C308	QETB1HM-225	2.2MF 50V ELECTRO	
	C311	QETB1EM-106	10MF 25V ELECTRO	
	C312	QETB1EM-106	10MF 25V ELECTRO	
	C313	QCS21HJ-470	47PF 50V CERAMIC	
	C314	QCS21HJ-470	47PF 50V CERAMIC	
	C315	QFLC1HK-682	6800PF 50V CERAMIC	
	C316	QFLC1HK-682	6800PF 50V CERAMIC	
	C317	QFLC1HK-562	5600PF 50V CERAMIC	
	C318	QFLC1HK-562	5600PF 50V CERAMIC	
	C319	QFLC1HK-123	0.012MF 50V CERAMIC	
	C320	QFLC1HK-123	0.012MF 50V CERAMIC	
	C321	QFLC1HK-332	3300PF 50V CERAMIC	
	C322	QFLC1HK-332	3300PF 50V CERAMIC	
	C323	QFLC1HK-103	0.01MF 50V CERAMIC	
	C324	QFLC1HK-103	0.01MF 50V CERAMIC	
	C325	QETB1CM-107	100MF 16V ELECTRO	
	C326	QETB1CM-107	100MF 16V ELECTRO	
	C335	QCS21HJ-101	100PF 50V CERAMIC	
	C336	QCS21HJ-101	100PF 50V CERAMIC	
	C337	QETB1EM-106	10MF 25V ELECTRO	
	C338	QETB1CM-476	47MF 16V ELECTRO	
	C339	QETB1HM-105	1MF 50V ELECTRO	
	C340	QETB1HM-105	1MF 50V ELECTRO	
	C341	QCS21HJ-561	560PF 50V CERAMIC	
	C342	QFP81HJ-822	8200PF 50V POLY	
	C343	QFV81HJ-123	0.012MF 50V T.FILM	
	C344	QFLC1HJ-222	2200PF 50V CERAMIC	
	C345	QFLC1HJ-222	2200PF 50V CERAMIC	
	C346	QFLC1HJ-682	6800PF 50V CERAMIC	
	C351	QETB1EM-106	10MF 25V ELECTRO	
	C355	QCF21HP-473	0.047MF 50V CERAMIC	
	C356	QCF21HP-473	0.047MF 50V CERAMIC	
	C381	QEK51HM-105G	1MF 50V ELECTRO	
	C382	QEK51HM-105G	1MF 50V ELECTRO	
	C383	QEK51EM-475G	4.7MF 25V ELECTRO	
	C384	QEK51EM-475G	4.7MF 25V ELECTRO	
	C385	QEK51HM-105G	1MF 50V ELECTRO	
	C386	QEK51HM-105G	1MF 50V ELECTRO	
	C387	QETB1HM-475	4.7MF 50V ELECTRO	
	C388	QETB1HM-475	4.7MF 50V ELECTRO	
	C389	QFV81HJ-224	0.22MF 50V T.FILM	
	C390	QFV81HJ-224	0.22MF 50V T.FILM	
	C391	QETB1HM-475	4.7MF 50V ELECTRO	
	C392	QETB1HM-475	4.7MF 50V ELECTRO	
	C393	QETB1CM-107	100MF 16V ELECTRO	
	C394	QETB1HM-475	4.7MF 50V ELECTRO	
	C395	QETB1HM-105	1MF 50V ELECTRO	
	C581	QCS21HJ-561	560PF 50V CERAMIC	
	C595	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C597	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C598	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C599	QETB1CM-227	220MF 16V ELECTRO	

## Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	R000	QRG022J-471AM	470 2W 0.M.FILM	
	R001	QRD167J-102	1K 1/6W CARBON	
	R002	QRD167J-102	1K 1/6W CARBON	
	R003	QRD167J-104	100K 1/6W CARBON	
	R004	QRD167J-104	100K 1/6W CARBON	
	R005	QRD14CJ-681S	680 1/4W UNF. CARBON	
	R006	QRD14CJ-681S	680 1/4W UNF. CARBON	
	R007	QRD167J-471	470 1/6W CARBON	
	R008	QRD167J-471	470 1/6W CARBON	
	R009	QRD167J-104	100K 1/6W CARBON	
	R010	QRD167J-104	100K 1/6W CARBON	
	R011	QRD167J-562	5.6K 1/6W CARBON	
	R012	QRD167J-562	5.6K 1/6W CARBON	
	R013	QRD167J-562	5.6K 1/6W CARBON	
	R014	QRD167J-562	5.6K 1/6W CARBON	
	R015	QRX012J-R22AM	0.22 1W M.FILM	
	R016	QRX012J-R22AM	0.22 1W M.FILM	
	R017	QRZ0077-101	100 1/4W FUSIBLE	
	R018	QRZ0077-100	10 1/4W FUSIBLE	
	R019	QRD14CJ-100S	10 1/4W UNF. CARBON	
	R020	QRD14CJ-100S	10 1/4W UNF. CARBON	
	R021	QRD14CJ-100S	10 1/4W UNF. CARBON	
	R022	QRD14CJ-100S	10 1/4W UNF. CARBON	
	R023	QRD167J-823	82K 1/6W CARBON	
	R024	QRD167J-104	100K 1/6W CARBON	

Δ : SAFETY PARTS

## Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
Δ	R025	QRD167J-103	10K 1/6W CARBON	
	R026	QRD167J-333	33K 1/6W CARBON	
	R027	QRD167J-562	5.6K 1/6W CARBON	
Δ	R028	QRG022J-471AM	470 2W O.M.FILM	
	R029	QRD167J-104	100K 1/6W CARBON	
	R031	QRD167J-562	5.6K 1/6W CARBON	
	R032	QRD167J-562	5.6K 1/6W CARBON	
	R033	QRD167J-562	5.6K 1/6W CARBON	
	R034	QRD167J-562	5.6K 1/6W CARBON	
Δ	R036	QRD125J-222	2.2K 1/2W UNF. CARBON	
Δ	R037	QRD125J-221	220 1/2W UNF. CARBON	
Δ	R038	QRD125J-221	220 1/2W UNF. CARBON	
	R039	QRD167J-184	180K 1/6W CARBON	
Δ	R041	QRZ0077-100	10 1/4W FUSIBLE	
	R042	QRD167J-123	12K 1/6W CARBON	
Δ	R043	QRD167J-822	8.2K 1/6W CARBON	
	R048	QRZ0077-100	10 1/4W FUSIBLE	
	R049	QRD167J-104	100K 1/6W CARBON	
	R050	QRD167J-104	100K 1/6W CARBON	
	R055	QRD167J-102	1K 1/6W CARBON	
	R056	QRD167J-221	220 1/6W CARBON	
	R061	QRD167J-152	1.5K 1/6W CARBON	
	R062	QRD167J-471	470 1/6W CARBON	
	R063	QRD167J-152	1.5K 1/6W CARBON	
	R064	QRD167J-472	4.7K 1/6W CARBON	
	R065	QRD167J-472	4.7K 1/6W CARBON	
	R066	QRD167J-470	47 1/6W CARBON	
	R067	QRD167J-152	1.5K 1/6W CARBON	
Δ	R070	QRZ0077-4R7	4.7 1/4W FUSIBLE	
	R071	QRD167J-392	3.9K 1/6W CARBON	
	R074	QRD167J-153	15K 1/6W CARBON	
	R075	QRD167J-103	10K 1/6W CARBON	
	R076	QRD167J-102	1K 1/6W CARBON	
Δ	R077	QRG022J-271AM	270 2W O.M.FILM	
	R078	QRD167J-472	4.7K 1/6W CARBON	
	R079	QRD167J-153	15K 1/6W CARBON	
	R081	QRD167J-121	120 1/6W CARBON	
	R082	QRD167J-121	120 1/6W CARBON	
	R083	QRD167J-121	120 1/6W CARBON	
	R084	QRD167J-121	120 1/6W CARBON	
	R085	QRD167J-103	10K 1/6W CARBON	
	R086	QRD167J-103	10K 1/6W CARBON	
	R088	QRD167J-471	470 1/6W CARBON	
	R089	QRD167J-103	10K 1/6W CARBON	
	R090	QRD167J-101	100 1/6W CARBON	
Δ	R091	QRZ0077-4R7	4.7 1/4W FUSIBLE	
	R092	QRD167J-472	4.7K 1/6W CARBON	
	R093	QRD167J-472	4.7K 1/6W CARBON	
Δ	R094	QRZ0077-4R7	4.7 1/4W FUSIBLE	
	R095	QRD167J-363	36K 1/6W CARBON	
	R096	QRD167J-363	36K 1/6W CARBON	
	R097	QRD167J-223	22K 1/6W CARBON	
	R098	QRD167J-223	22K 1/6W CARBON	
	R203	QRD167J-104	100K 1/6W CARBON	
	R204	QRD167J-104	100K 1/6W CARBON	
	R205	QRD167J-473	47K 1/6W CARBON	
	R206	QRD167J-473	47K 1/6W CARBON	
	R207	QRD167J-100	10 1/6W CARBON	
	R208	QRD167J-100	10 1/6W CARBON	
	R209	QRD167J-105	1M 1/6W CARBON	
	R210	QRD167J-105	1M 1/6W CARBON	
	R221	QVPA601-201A	200 VARIABLE	
	R222	QVPA601-201A	200 VARIABLE	
	R223	QVPA601-201A	200 VARIABLE	
	R224	QVPA601-201A	200 VARIABLE	
	R225	QRD167J-470	47 1/6W CARBON	
	R226	QRD167J-470	47 1/6W CARBON	
	R227	QRD167J-334	330K 1/6W CARBON	
	R228	QRD167J-334	330K 1/6W CARBON	
	R229	QRD167J-432	4.3K 1/6W CARBON	
	R230	QRD167J-432	4.3K 1/6W CARBON	
	R231	QRD167J-152	1.5K 1/6W CARBON	
	R232	QRD167J-152	1.5K 1/6W CARBON	
	R233	QRD167J-512	5.1K 1/6W CARBON	
	R234	QRD167J-512	5.1K 1/6W CARBON	
	R235	QRD167J-223	22K 1/6W CARBON	
	R236	QRD167J-223	22K 1/6W CARBON	
	R237	QRD167J-512	5.1K 1/6W CARBON	
	R238	QRD167J-512	5.1K 1/6W CARBON	
	R239	QRD167J-105	1M 1/6W CARBON	
	R240	QRD167J-105	1M 1/6W CARBON	
	R241	QRD167J-105	1M 1/6W CARBON	
	R242	QRD167J-105	1M 1/6W CARBON	
	R243	QRD167J-471	470 1/6W CARBON	
	R244	QRD167J-472	4.7K 1/6W CARBON	
	R245	QRD167J-472	4.7K 1/6W CARBON	
	R247	QRD167J-102	1K 1/6W CARBON	
	R248	QRD167J-102	1K 1/6W CARBON	
	R254	QRD167J-103	10K 1/6W CARBON	
	R255	QVPA601-502A	5K VARIABLE	
	R256	QVPA601-502A	5K VARIABLE	
	R257	QRD167J-133	13K 1/6W CARBON	
	R258	QRD167J-123	12K 1/6W CARBON	
	R259	QRD167J-224	220K 1/6W CARBON	
	R260	QRD167J-394	390K 1/6W CARBON	

Δ : SAFETY PARTS

## Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	R264	QRD167J-103	10K 1/6W CARBON	
	R265	QVPA601-502A	5K VARIABLE	
	R266	QVPA601-502A	5K VARIABLE	
	R267	QRD167J-133	13K 1/6W CARBON	
	R268	QRD167J-123	12K 1/6W CARBON	
	R269	QRD167J-224	220K 1/6W CARBON	
	R270	QRD167J-394	390K 1/6W CARBON	
	R271	QRD167J-103	10K 1/6W CARBON	
	R272	QRD167J-472	4.7K 1/6W CARBON	
	R273	QRD167J-472	4.7K 1/6W CARBON	
	R275	QRD167J-102	1K 1/6W CARBON	
	R276	QRD167J-102	1K 1/6W CARBON	
	R277	QRD167J-103	10K 1/6W CARBON	
	R278	QRD167J-103	10K 1/6W CARBON	
	R281	QRD167J-474	470K 1/6W CARBON	
	R282	QRD167J-474	470K 1/6W CARBON	
	R283	QRD167J-393	39K 1/6W CARBON	
	R284	QRD167J-393	39K 1/6W CARBON	
	R285	QRD167J-112	1.1K 1/6W CARBON	
	R286	QRD167J-112	1.1K 1/6W CARBON	
	R287	QRD167J-104	100K 1/6W CARBON	
	R288	QRD167J-104	100K 1/6W CARBON	
	R289	QRD167J-104	100K 1/6W CARBON	
	R290	QRD167J-104	100K 1/6W CARBON	
	R291	QRD167J-272	2.7K 1/6W CARBON	
	R292	QRD167J-272	2.7K 1/6W CARBON	
	R293	QRD167J-104	100K 1/6W CARBON	
	R294	QRD167J-104	100K 1/6W CARBON	
	R295	QRD167J-243	24K 1/6W CARBON	
	R296	QRD167J-243	24K 1/6W CARBON	
	R297	QRD167J-513	51K 1/6W CARBON	
	R298	QRD167J-513	51K 1/6W CARBON	
	R301	QRD167J-333	33K 1/6W CARBON	
	R302	QRD167J-333	33K 1/6W CARBON	
	R303	QRD167J-473	47K 1/6W CARBON	
	R304	QRD167J-473	47K 1/6W CARBON	
	R305	QRD167J-683	68K 1/6W CARBON	
	R306	QRD167J-683	68K 1/6W CARBON	
	R307	QRD167J-153	15K 1/6W CARBON	
	R308	QRD167J-153	15K 1/6W CARBON	
	R309	QRD167J-153	15K 1/6W CARBON	
	R310	QRD167J-153	15K 1/6W CARBON	
	R313	QRD167J-182	1.8K 1/6W CARBON	
	R314	QRD167J-182	1.8K 1/6W CARBON	
	R315	QRD167J-511	510 1/6W CARBON	
	R316	QRD167J-511	510 1/6W CARBON	
	R317	QRD167J-301	300 1/6W CARBON	
	R318	QRD167J-301	300 1/6W CARBON	
	R319	QRD167J-472	4.7K 1/6W CARBON	
	R320	QRD167J-472	4.7K 1/6W CARBON	
	R321	QRD167J-362	3.6K 1/6W CARBON	
	R322	QRD167J-362	3.6K 1/6W CARBON	
	R323	QRD167J-122	1.2K 1/6W CARBON	
	R324	QRD167J-122	1.2K 1/6W CARBON	
	R325	QRD167J-104	100K 1/6W CARBON	
	R326	QRD167J-104	100K 1/6W CARBON	
	R327	QRD167J-151	150 1/6W CARBON	
	R328	QRD167J-151	150 1/6W CARBON	
	R329	QRD167J-302	3K 1/6W CARBON	
	R330	QRD167J-302	3K 1/6W CARBON	
	R331	QRD167J-221	220 1/6W CARBON	
	R332	QRD167J-221	220 1/6W CARBON	
	R335	QVPA601-104A	100K VARIABLE	
	R336	QVPA601-104A	100K VARIABLE	
	R337	QRD167J-473	47K 1/6W CARBON	
	R338	QRD167J-473	47K 1/6W CARBON	
Δ	R339	QRD167J-5R6S	5.6 1/4W UNF. CARBON	
	R340	QRD167J-472	4.7K 1/6W CARBON	
	R341	QRD167J-104	100K 1/6W CARBON	
	R342	QRD167J-332	3.3K 1/6W CARBON	
	R343	QRD167J-151	150 1/6W CARBON	
	R344	QRD167J-151	150 1/6W CARBON	
Δ	R345	QRZ0077-100	10 1/4W FUSIBLE	
	R351	QRD167J-153	15K 1/6W CARBON	
	R352	QRD167J-153	15K 1/6W CARBON	
	R353	QRD167J-182	1.8K 1/6W CARBON	
	R354	QRD167J-182	1.8K 1/6W CARBON	
	R355	QRD167J-561	560 1/6W CARBON	
	R356	QRD167J-561	560 1/6W CARBON	
	R357	QRD167J-223	22K 1/6W CARBON	
	R358	QRD167J-223	22K 1/6W CARBON	
	R359	QRD167J-392	3.9K 1/6W CARBON	
	R360	QRD167J-392	3.9K 1/6W CARBON	
	R361	QRD167J-473	47K 1/6W CARBON	
	R362	QRD167J-473	47K 1/6W CARBON	
	R363	QRD167J-153	15K 1/6W CARBON	
	R364	QRD167J-153	15K 1/6W CARBON	
	R365	QRD167J-103	10K 1/6W CARBON	
	R366	QRD167J-103	10K 1/6W CARBON	
	R367	QVPA601-503A	50K VARIABLE	
	R368	QVPA601-503A	50K VARIABLE	
	R371	QRD167J-103	10K 1/6W CARBON	
	R372	QRD167J-103	10K 1/6W CARBON	
	R373	QRD167J-393	39K 1/6W CARBON	
	R374	QRD167J-132	1.3K 1/6W CARBON	

Δ : SAFETY PARTS

## Resistors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R375	QRD167J-222	2.2K	1/6W	CARBON	
	R376	QRD167J-222	2.2K	1/6W	CARBON	
	R381	QRD167J-153	15K	1/6W	CARBON	
	R382	QRD167J-153	15K	1/6W	CARBON	
	R383	QRD167J-822	8.2K	1/6W	CARBON	
△	R384	QRD167J-822	8.2K	1/6W	CARBON	
	R385	QRZ0077-220	22	1/4W	FUSIBLE	
	R386	QRD167J-183	18K	1/6W	CARBON	
	R387	QRD167J-103	10K	1/6W	CARBON	
	R388	QRD167J-103	10K	1/6W	CARBON	
	R395	QRD167J-103	10K	1/6W	CARBON	
	R396	QRD167J-103	10K	1/6W	CARBON	
	R581	QRD167J-102	1K	1/6W	CARBON	
	R582	QRD167J-102	1K	1/6W	CARBON	
	R583	QRD167J-103	10K	1/6W	CARBON	
	R584	QRD167J-103	10K	1/6W	CARBON	
	R585	QRD167J-103	10K	1/6W	CARBON	
	R586	QRD167J-103	10K	1/6W	CARBON	
	R587	QRD167J-822	8.2K	1/6W	CARBON	
	R588	QRD167J-822	8.2K	1/6W	CARBON	
	R589	QRD167J-472	4.7K	1/6W	CARBON	
	R590	QRD167J-472	4.7K	1/6W	CARBON	
	R599	QRD167J-102	1K	1/6W	CARBON	

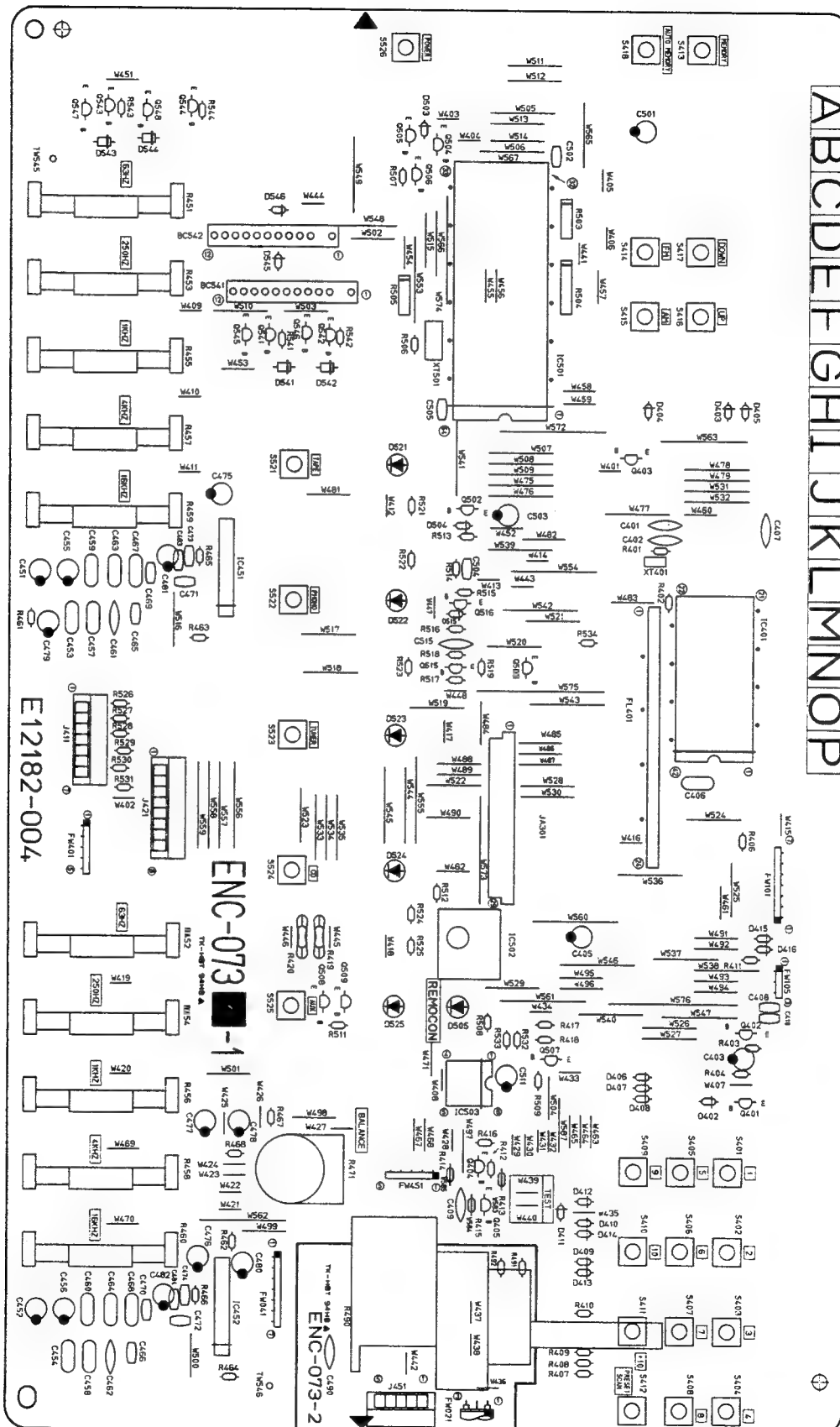
△ : SAFETY PARTS

## Others

△	ITEM	PART NUMBER	DESCRIPTION			AREA
		EMG7331-001	FUSE CLIP			
		E12181-004	CIRCUIT BOARD			
	J001	EMB90YV-401A	SPEAKER TERMINAL			
	J004	QMA1221-009	DC JACK			
	J011	VMC0107-006	SOCKET			
	J017	QMS6312-024	HEADPHONE JACK			
	J021	VMC0107-003	CONNECTOR			
	J041	VMC0107-007	SOCKET			
	J251	VMC0107-004	CONNECTOR			
	J261	VMC0107-004	CONNECTOR			
	J281	EMN00TV-604A	6P PIN JACK			
	J291	QMS3501-021	MINI JACK			
	J901	EMV5133-003K	PLUG ASSY			
	K051	ENZ8101-007	INDUCTOR			D
	K052	ENZ8101-007	INDUCTOR			D
	K281	ENZ8101-008	INDUCTOR			D
	L001	EQL0001-R45	INDUCTOR			
	L002	EQL0001-R45	INDUCTOR			
	L221	EQL2106-223	INDUCTOR			
	L222	EQL2106-223	INDUCTOR			
	L223	EQL4004-101	INDUCTOR			D
	L224	EQL4004-101	INDUCTOR			D
	L301	EQL2106-562	INDUCTOR			
	L302	EQL2106-562	INDUCTOR			
	L335	ENZ6002-010	OSC COIL			
	P201	EMV5133-003K	PLUG ASSY			
	P202	EMV5133-005K	PLUG ASSY			
	S335	QSS6A12-E01	SLIDE SWITCH			
	EP001	E70859-001	EARTH PLATE			
	EP002	E70859-001	EARTH PLATE			D
	FW015	EWK35B-30SST	FLAT WIRE			
	JA103	EMV5125-005	PLUG ASSY			
	JA104	EMV5125-004	PLUG ASSY			
	JB301	EMV7123-029	CONNECTOR			
	RY001	ESK8024-212	RELAY			
	RY002	ESK1012-211M	RELAY			

■ ENC-073 □ System Control and FL Display PC Board Ass'y

Note: ENC-073 □ varies according to the areas employed. See note (1) when placing an order.





## Note (1)

PC Board Ass'y	Designated Areas
ENC-073 <b>E</b>	Other Countries
ENC-073 <b>F</b>	Australia
ENC-073 <b>G</b>	Continental Europe (with LW) , the U.K.(with LW) , Switzerland (with LW) , West Germany (with LW)
ENC-073 <b>H</b>	Italy (with LW)

## Transistors

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
	Q401	DTC144ES	SILICON	ROHM	
	Q402	DTC114YS	SILICON	ROHM	
	Q403	DTA144ES	SILICON	ROHM	
	Q404	2SC1740S(R,S)	SILICON	ROHM	
	Q405	2SC1740S(R,S)	SILICON	ROHM	
	Q502	DTC114YS	SILICON	ROHM	
	Q503	DTA144ES	SILICON	ROHM	
	Q504	DTC144ES	SILICON	ROHM	
	Q505	DTC144ES	SILICON	ROHM	
	Q506	DTC144ES	SILICON	ROHM	
	Q507	DTC144ES	SILICON	ROHM	
	Q508	DTC144ES	SILICON	ROHM	
	Q509	DTC114YS	SILICON	ROHM	
	Q515	2SC1740S(R,S)	SILICON	ROHM	
	Q516	DTA144ES	SILICON	ROHM	
	Q541	2SC3377(Q,R)	SILICON	ROHM	
	Q542	2SC3377(Q,R)	SILICON	ROHM	
	Q543	2SC3377(Q,R)	SILICON	ROHM	
	Q544	2SC3377(Q,R)	SILICON	ROHM	
	Q545	DTC114TS	SILICON	6997	
	Q546	DTC114TS	SILICON	6997	
	Q547	DTC114TS	SILICON	6997	
	Q548	DTC114TS	SILICON	6997	

## I.C.s

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
	IC401	LC6514B-4245	I.C.	SANYO	
	IC451	BA3812L	I.C.	ROHM	
	IC452	BA3812L	I.C.	ROHM	
	IC501	HD6140B1SB47	I.C.	HITACHI	
	IC502	GP1U501X	I.C.	SHARP	
	IC503	LB1639-CV	I.C.	SANYO	

## Diodes

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
	D402	1SS133	SILICON	ROHM	
	D403	1SS133	SILICON	ROHM	
	D404	1SS133	SILICON	ROHM	
	D405	1SS133	SILICON	ROHM	
	D406	1SS133	SILICON	ROHM	
	D407	1SS133	SILICON	ROHM	
	D408	1SS133	SILICON	ROHM	
	D409	1SS133	SILICON	ROHM	
	D411	1SS133	SILICON	ROHM	E
	D412	1SS133	SILICON	ROHM	G
	D412	1SS133	SILICON	ROHM	H
	D413	1SS133	SILICON	ROHM	
	D414	1SS133	SILICON	ROHM	
	D415	1SS133	SILICON	ROHM	
	D416	1SS133	SILICON	ROHM	
	D503	1SS133	SILICON	ROHM	
	D504	1SS133	SILICON	ROHM	
	D505	SLH-34VC50F124	L.E.D.	ROHM	
	D515	1SS133	SILICON	ROHM	
	D521	SLH-34DC50F124	L.E.D.	ROHM	
	D522	SLH-34DC50F124	L.E.D.	ROHM	
	D523	SLH-34DC50F124	L.E.D.	ROHM	
	D524	SLH-34DC50F124	L.E.D.	ROHM	
	D525	SLH-34DC50F124	L.E.D.	ROHM	
	D541	1SR139-200	SILICON	ROHM	

## Diodes

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
	D542	1SR139-200	SILICON	ROHM	
	D543	1SR139-200	SILICON	ROHM	
	D544	1SR139-200	SILICON	ROHM	
	D545	1SS133	SILICON	ROHM	
	D546	1SS133	SILICON	ROHM	

## Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
	C401	QCS21HJ-101	100PF	50V	
	C402	QCS21HJ-101	100PF	50V	
	C403	QEK51HM-105G	1MF	50V	
	C405	QER51CM-476	47MF	16V	
	C406	QC20205-155	1.5MF	25V	
	C407	QCF21HP-103	0.01MF	50V	
	C408	QCB81HK-221	220PF	50V	E
	C409	QCY21HK-332	3300PF	50V	
	C410	QCB81HK-221	220PF	50V	E
	C451	QEK51HM-225G	2.2MF	50V	
	C452	QEK51HM-225G	2.2MF	50V	
	C453	QFLC1HK-273	0.027MF	50V	
	C454	QFLC1HK-273	0.027MF	50V	
	C455	QEK51HM-474G	0.47MF	50V	
	C456	QEK51HM-474G	0.47MF	50V	
	C457	QFLC1HK-822	8200PF	50V	
	C458	QFLC1HK-822	8200PF	50V	
	C459	QFLC1HK-124	0.12MF	50V	
	C460	QFLC1HK-124	0.12MF	50V	
	C461	QCY21HK-222	2200PF	50V	
	C462	QCY21HK-222	2200PF	50V	
	C463	QFLC1HK-333	0.033MF	50V	
	C464	QFLC1HK-333	0.033MF	50V	
	C465	QCB81HK-471	470PF	50V	
	C466	QCB81HK-471	470PF	50V	
	C467	QFLC1HK-822	8200PF	50V	
	C468	QFLC1HK-822	8200PF	50V	
	C469	QCB81HK-121	120PF	50V	
	C470	QCB81HK-121	120PF	50V	
	C471	QCB81HK-471	470PF	50V	
	C472	QCB81HK-471	470PF	50V	
	C473	QCB81HK-101	100PF	50V	
	C474	QCB81HK-101	100PF	50V	
	C475	QEK51HM-225G	2.2MF	50V	
	C476	QEK51HM-225G	2.2MF	50V	
	C477	QEK51CM-107	100MF	16V	
	C478	QEK51CM-107	100MF	16V	
	C479	QEK51HM-225G	2.2MF	50V	
	C480	QEK51HM-225G	2.2MF	50V	
	C481	QEK51CM-106G	10MF	16V	
	C482	QEK51CM-106G	10MF	16V	
	C483	QCG81HK-102	1000PF	50V	
	C484	QCG81HK-102	1000PF	50V	
	C490	QCF21HP-103	0.01MF	50V	
	C501	QEK51EM-476	47MF	25V	
	C502	QCH81EZ-223	0.022MF	25V	
	C503	QEK51CM-226	22MF	16V	
	C504	QCV81CM-103	0.01MF	16V	
	C505	QCV81CM-103	0.01MF	16V	
	C511	QET81CM-476	47MF	16V	
	C515	QCF21HP-103	0.01MF	50V	

# Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	R401	QRD167J-105	1M 1/6W CARBON	
	R402	QRD167J-152	1.5K 1/6W CARBON	
	R403	QRD167J-392	3.9K 1/6W CARBON	
	R404	QRD167J-223	22K 1/6W CARBON	
	R406	QRD167J-472	4.7K 1/6W CARBON	
	R407	QRD167J-472	4.7K 1/6W CARBON	
	R408	QRD167J-472	4.7K 1/6W CARBON	
	R409	QRD167J-472	4.7K 1/6W CARBON	
	R410	QRD167J-472	4.7K 1/6W CARBON	
	R411	QRD167J-104	100K 1/6W CARBON	
	R412	QRD167J-103	10K 1/6W CARBON	
	R413	QRD167J-103	10K 1/6W CARBON	
	R414	QRD167J-472	4.7K 1/6W CARBON	
	R415	QRD167J-223	22K 1/6W CARBON	
	R416	QRD167J-221	220 1/6W CARBON	
	R417	QRD167J-120	12 1/6W CARBON	
	R418	QRD167J-120	12 1/6W CARBON	
	R451	QVWB06W-E15C	100K VARIABLE	
	R452	QVWB06W-E15C	100K VARIABLE	
	R453	QVWB06W-E15C	100K VARIABLE	
	R454	QVWB06W-E15C	100K VARIABLE	
	R455	QVWB06W-E15C	100K VARIABLE	
	R456	QVWB06W-E15C	100K VARIABLE	
	R457	QVWB06W-E15C	100K VARIABLE	
	R458	QVWB06W-E15C	100K VARIABLE	
	R459	QVWB06W-E15C	100K VARIABLE	
	R460	QVWB06W-E15C	100K VARIABLE	
	R461	QRD167J-102	1K 1/6W CARBON	
	R462	QRD167J-102	1K 1/6W CARBON	
	R463	QRD167J-392	3.9K 1/6W CARBON	
	R464	QRD167J-392	3.9K 1/6W CARBON	
	R465	QRD167J-392	3.9K 1/6W CARBON	
	R466	QRD167J-392	3.9K 1/6W CARBON	
	R467	QRD167J-222	2.2K 1/6W CARBON	
	R468	QRD167J-222	2.2K 1/6W CARBON	
	R471	QVDA92W-E15B	100K VARIABLE	
	R490	QVDB91B-E15F	100K VARIABLE	
	R491	QRD167J-223	22K 1/6W CARBON	
	R492	QRD167J-223	22K 1/6W CARBON	
	R503	QRB049J-223	22K 1/10W R.NETWORK	
	R504	QRB069J-223	22K 1/10W R.NETWORK	
	R505	QRB049J-223	22K 1/10W R.NETWORK	
	R506	QRD167J-105	1M 1/6W CARBON	
	R507	QRD167J-103	10K 1/6W CARBON	
	R508	QRD167J-221	220 1/6W CARBON	
	R509	QRD167J-103	10K 1/6W CARBON	
	R511	QRD167J-103	10K 1/6W CARBON	
	R512	QRD167J-102	1K 1/6W CARBON	
	R513	QRD167J-104	100K 1/6W CARBON	
	R514	QRD167J-223	22K 1/6W CARBON	
	R515	QRD167J-473	47K 1/6W CARBON	
	R516	QRD167J-473	47K 1/6W CARBON	
	R517	QRD167J-221	220 1/6W CARBON	
	R518	QRD167J-223	22K 1/6W CARBON	
	R521	QRD167J-151	150 1/6W CARBON	
	R522	QRD167J-151	150 1/6W CARBON	
	R523	QRD167J-151	150 1/6W CARBON	
	R524	QRD167J-151	150 1/6W CARBON	
	R525	QRD167J-151	150 1/6W CARBON	
	R526	QRD167J-221	220 1/6W CARBON	
	R527	QRD167J-221	220 1/6W CARBON	
	R528	QRD167J-221	220 1/6W CARBON	
	R529	QRD167J-391	390 1/6W CARBON	
	R530	QRD167J-221	220 1/6W CARBON	
	R531	QRD167J-221	220 1/6W CARBON	
	R532	QRD167J-222	2.2K 1/6W CARBON	
	R533	QRD167J-222	2.2K 1/6W CARBON	
	R541	QRD167J-102	1K 1/6W CARBON	
	R542	QRD167J-102	1K 1/6W CARBON	
	R543	QRD167J-102	1K 1/6W CARBON	
	R544	QRD167J-102	1K 1/6W CARBON	

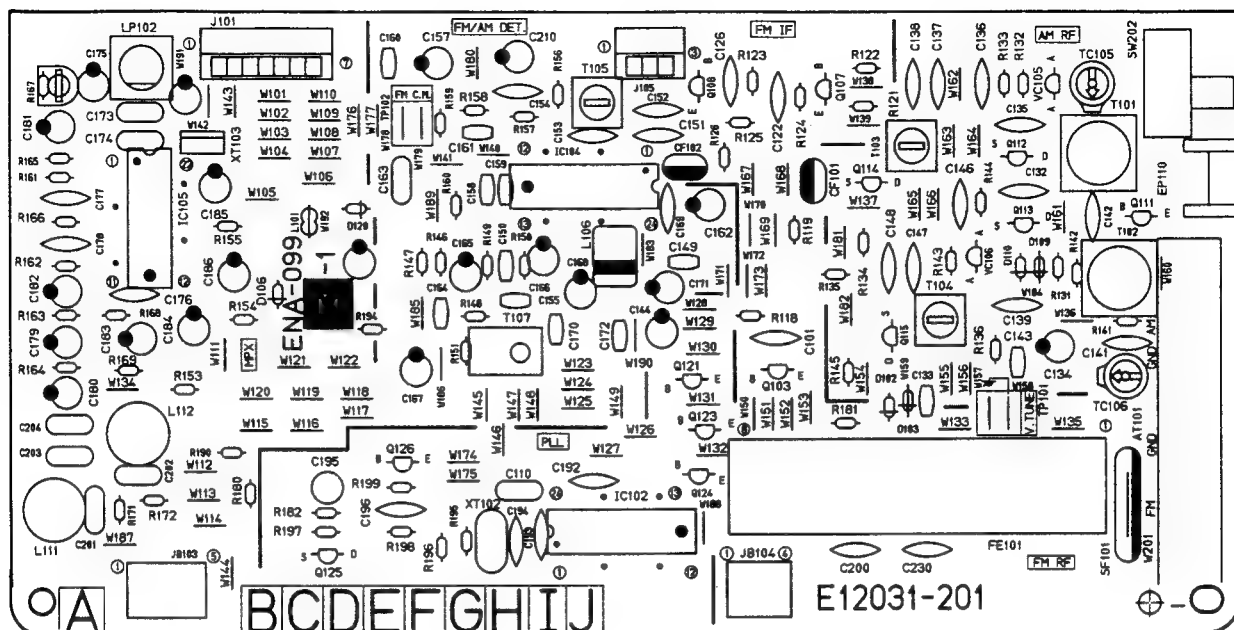
# Others

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
		E12182-004	CIRCUIT BOARD	
	J411	VMC0107-007	SOCKET	
	J421	VMC0107-008	CONNECTOR	
	J451	VMC0107-005	CONNECTOR	
	S401	ESP0001-018	TACT SWITCH	
	S402	ESP0001-018	TACT SWITCH	
	S403	ESP0001-018	TACT SWITCH	
	S404	ESP0001-018	TACT SWITCH	
	S405	ESP0001-018	TACT SWITCH	
	S406	ESP0001-018	TACT SWITCH	
	S407	ESP0001-018	TACT SWITCH	
	S408	ESP0001-018	TACT SWITCH	
	S409	ESP0001-018	TACT SWITCH	
	S410	ESP0001-018	TACT SWITCH	
	S411	ESP0001-018	TACT SWITCH	
	S412	ESP0001-018	TACT SWITCH	
	S413	ESP0001-018	TACT SWITCH	
	S414	ESP0001-018	TACT SWITCH	
	S415	ESP0001-018	TACT SWITCH	
	S416	ESP0001-018	TACT SWITCH	
	S417	ESP0001-018	TACT SWITCH	
	S418	ESP0001-018	TACT SWITCH	
	S521	ESP0001-018	TACT SWITCH	
	S522	ESP0001-018	TACT SWITCH	
	S523	ESP0001-018	TACT SWITCH	
	S524	ESP0001-018	TACT SWITCH	
	S525	ESP0001-018	TACT SWITCH	
	S526	ESP0001-018	TACT SWITCH	
	BC542	EWS20C-005	SOCKET WIRE	
	BC542	EWS20C-006	SOCKET WIRE	
	BK401	E75817-001	HOLDER	
	FL401	ELU0001-077	FL TUBE	
	FS401	E3400-439	SPACER	
	FW021	EWR23C-35JN	FLAT WIRE	
	FW041	EWR37B-30LST	FLAT WIRE	
	FW101	EWR37B-20KST	FLAT WIRE	
	FW105	EWR33B-25KST	FLAT WIRE	
	FW451	EWR35B-16LST	FLAT WIRE	E
	JA301	EMV7123-029	CONNECTOR	
	XT401	ECX0001-000KS	RESONATOR	
	XT501	ECX0004-194KM	RESONATOR	

## ■ ENA-099 □ Tuner PC Board Ass'y

Note: ENA-099 □ varies according to the areas employed. See note (1) when placing an order.

[ Except Switzerland (with LW) , West Germany (with LW) , Italy (with LW) ]



Note (1)

PC Board Ass'y	Designated Areas
ENA-099 <b>B</b>	Other Countries
ENA-099 <b>C</b>	Australia
ENA-099 <b>D</b>	Continental Europe (with LW)
ENA-099 <b>F</b>	the U.K.(with LW)

## Diodes

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	D102	1SS133	SILICON ROHM	D
	D102	1SS133	SILICON ROHM	F
	D103	1SS133	SILICON ROHM	D
	D103	1SS133	SILICON ROHM	F
	D106	1SS133	SILICON ROHM	
	D109	1SS133	SILICON ROHM	D
	D109	1SS133	SILICON ROHM	F
	D110	1SS133	SILICON ROHM	D
	D110	1SS133	SILICON ROHM	F
	D120	1SS133	SILICON ROHM	
	VC105	SVC342(L)	VARICAP SANYO	
	VC106	SVC342(L)	VARICAP SANYO	D
	VC106	SVC342(L)	VARICAP SANYO	F

## Transistors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q103	2SC461(B,C)	SILICON HITACHI	
	Q107	2SC535(B,C)	SILICON HITACHI	
	Q108	2SC461(B,C)	SILICON HITACHI	
	Q111	2SD2144S(VW)	SILICON ROHM	D
	Q111	2SD2144S(VW)	SILICON ROHM	F
	Q112	2SK301(Q,R)	F.E.T MATSUSHITA	
	Q113	2SK301(Q,R)	F.E.T MATSUSHITA	D
	Q113	2SK301(Q,R)	F.E.T MATSUSHITA	F
	Q114	2SK301(P,Q)	F.E.T MATSUSHITA	D
	Q114	2SK301(P,Q)	F.E.T MATSUSHITA	F
	Q115	2SK301(P,Q)	F.E.T MATSUSHITA	D
	Q115	2SK301(P,Q)	F.E.T MATSUSHITA	F
	Q121	DTA114YS	SILICON ROHM	D
	Q121	DTA114YS	SILICON ROHM	F
	Q123	DTA114YS	SILICON ROHM	
	Q124	DTA114YS	SILICON ROHM	
	Q125	2SK301(Q2)	F.E.T MATSUSHITA	
	Q126	2SC458(D)	SILICON HITACHI	

## Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	C101	QCF21HP-223	0.022MF 50V CERAMIC	
	C110	QC2020S-155	1.5MF 25V CERAMIC	
	C122	QCF21HP-223	0.022MF 50V CERAMIC	
	C126	QCF21HP-223	0.022MF 50V CERAMIC	
	C132	QCS21HJ-561	560PF 50V CERAMIC	
	C133	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C134	QETB1EM-106	10MF 25V ELECTRO	
	C135	QCC21EM-223	0.022MF 25V CERAMIC	
	C136	QCT26CH-180	18PF 50V CERAMIC	
	C137	QCT26CH-221	220PF 50V CERAMIC	
	C138	QCT26CH-241	240PF 50V CERAMIC	
	C139	QCC21EM-223	0.022MF 25V CERAMIC	D
	C139	QCC21EM-223	0.022MF 25V CERAMIC	F
	C141	QCS21HJ-270	27PF 50V CERAMIC	D
	C141	QCS21HJ-270	27PF 50V CERAMIC	F
	C142	QCY21HK-272	2700PF 50V CERAMIC	D
	C142	QCY21HK-272	2700PF 50V CERAMIC	F
	C143	QCHB1EZ-223	0.022MF 25V CERAMIC	D
	C143	QCHB1EZ-223	0.022MF 25V CERAMIC	F
	C144	QETB1EM-106	10MF 25V ELECTRO	D
	C144	QETB1EM-106	10MF 25V ELECTRO	F
	C146	QCT26CH-680	68PF 50V CERAMIC	D
	C146	QCT26CH-680	68PF 50V CERAMIC	F
	C147	QCT26CH-220	22PF 50V CERAMIC	D
	C147	QCT26CH-220	22PF 50V CERAMIC	F
	C148	QCT26CH-121	120PF 50V CERAMIC	D
	C148	QCT26CH-121	120PF 50V CERAMIC	F
	C149	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C150	QCHB1EZ-223	0.022MF 25V CERAMIC	
	C151	QCF21HP-223	0.022MF 50V CERAMIC	

## I.C.s

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC102	LC7218	I.C. SANYO	
	IC104	LA1266A	I.C. SANYO	
	IC105	LA3401	I.C. SANYO	

## Capacitors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
C152	QCF21HP-223	0.022MF	50V CERAMIC	
C153	QCC21EM-223	0.022MF	25V CERAMIC	
C154	QCF21HP-223	0.022MF	50V CERAMIC	
C155	QCHB1EZ-223	0.022MF	25V CERAMIC	
C157	QETB1HM-474	0.47MF	50V ELECTRO	
C158	QCBBIHK-101	100PF	50V CERAMIC	
C159	QCBBIHK-101	100PF	50V CERAMIC	
C160	QCBBIHK-221	220PF	50V CERAMIC	B
C160	QCBBIHK-221	220PF	50V CERAMIC	C
C160	QCBBIHK-101	100PF	50V CERAMIC	D
C160	QCBBIHK-101	100PF	50V CERAMIC	F
C161	QCHB1EZ-223	0.022MF	25V CERAMIC	
C162	QETB1EM-106	10MF	25V ELECTRO	
C163	QCY21HK-102	1000PF	50V CERAMIC	
C164	QCHB1EZ-223	0.022MF	25V CERAMIC	
C165	QETB1HM-474	0.47MF	50V ELECTRO	
C166	QETB1HM-225	2.2MF	50V ELECTRO	
C167	QETB1HM-225	2.2MF	50V ELECTRO	
C168	QETB1HM-475	4.7MF	50V ELECTRO	
C169	QCF21HP-223	0.022MF	50V CERAMIC	
C170	QCHB1EZ-223	0.022MF	25V CERAMIC	
C171	QETB1EM-106	10MF	25V ELECTRO	
C172	QCVB1CM-103	0.01MF	16V CERAMIC	
C173	QFLC1HK-393	0.039MF	50V CERAMIC	B
C173	QFLC1HK-223	0.022MF	50V CERAMIC	C
C173	QFLC1HK-223	0.022MF	50V CERAMIC	D
C173	QFLC1HK-223	0.022MF	50V CERAMIC	F
C174	QFLC1HK-473	0.047MF	50V CERAMIC	
C175	QETB1EM-106	10MF	25V ELECTRO	
C176	QCY21HK-102	1000PF	50V CERAMIC	
C177	QCS21HJ-821	820PF	50V CERAMIC	B
C177	QCS21HJ-391	390PF	50V CERAMIC	C
C177	QCS21HJ-391	390PF	50V CERAMIC	D
C177	QCS21HJ-561	560PF	50V CERAMIC	F
C178	QCS21HJ-821	820PF	50V CERAMIC	B
C178	QCS21HJ-391	390PF	50V CERAMIC	C
C178	QCS21HJ-391	390PF	50V CERAMIC	D
C178	QCS21HJ-561	560PF	50V CERAMIC	F
C179	QETB1HM-225	2.2MF	50V ELECTRO	
C180	QETB1HM-225	2.2MF	50V ELECTRO	
C181	QETB1EM-106	10MF	25V ELECTRO	
C182	QETB1HM-225	2.2MF	50V ELECTRO	
C183	QETB1HM-105	1MF	50V ELECTRO	
C184	QETB1HM-105	1MF	50V ELECTRO	
C185	QETB1HM-225	2.2MF	50V ELECTRO	
C186	QETB1HM-474	0.47MF	50V ELECTRO	
C192	QCC21EM-473	0.047MF	25V CERAMIC	
C193	QCS21HJ-180	18PF	50V CERAMIC	
C194	QCS21HJ-180	18PF	50V CERAMIC	
C195	QEN51HM-474	0.47MF	50V NON POLE	
C196	QCY21HK-102	1000PF	50V CERAMIC	
C200	QCF21HP-103	0.01MF	50V CERAMIC	
C201	QCY21HK-332	3300PF	50V CERAMIC	
C202	QCY21HK-332	3300PF	50V CERAMIC	
C203	QCY21HK-182	1800PF	50V CERAMIC	
C204	QCY21HK-182	1800PF	50V CERAMIC	
C210	QETB1CM-227	220MF	16V ELECTRO	
C230	QCF21HP-103	0.01MF	50V CERAMIC	

## Resistors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R151	QRD167J-222	2.2K	1/6W	CARBON	
	R153	QRD167J-103	10K	1/6W	CARBON	
	R154	QRD167J-103	10K	1/6W	CARBON	
	R155	QRD167J-562	5.6K	1/6W	CARBON	
	R156	QRD167J-682	6.8K	1/6W	CARBON	
	R157	QRD167J-103	10K	1/6W	CARBON	
	R158	QRD167J-273	27K	1/6W	CARBON	
	R159	QRD167J-561	560	1/6W	CARBON	
	R160	QRD167J-562	5.6K	1/6W	CARBON	B
	R160	QRD167J-183	18K	1/6W	CARBON	C
	R160	QRD167J-183	18K	1/6W	CARBON	D
	R160	QRD167J-822	8.2K	1/6W	CARBON	F
	R161	QRD167J-823	82K	1/6W	CARBON	B
	R161	QRD167J-124	120K	1/6W	CARBON	C
	R161	QRD167J-124	120K	1/6W	CARBON	D
	R161	QRD167J-823	82K	1/6W	CARBON	F
	R162	QRD167J-823	82K	1/6W	CARBON	B
	R162	QRD167J-124	120K	1/6W	CARBON	C
	R162	QRD167J-124	120K	1/6W	CARBON	D
	R162	QRD167J-823	82K	1/6W	CARBON	F
	R163	QRD167J-472	4.7K	1/6W	CARBON	B
	R163	QRD167J-392	3.9K	1/6W	CARBON	C
	R163	QRD167J-392	3.9K	1/6W	CARBON	D
	R163	QRD167J-392	3.9K	1/6W	CARBON	F
	R164	QRD167J-472	4.7K	1/6W	CARBON	B
	R164	QRD167J-392	3.9K	1/6W	CARBON	C
	R164	QRD167J-392	3.9K	1/6W	CARBON	D
	R164	QRD167J-392	3.9K	1/6W	CARBON	F
	R165	QRD167J-184	180K	1/6W	CARBON	B
	R165	QRD167J-274	270K	1/6W	CARBON	C
	R165	QRD167J-274	270K	1/6W	CARBON	D
	R165	QRD167J-274	270K	1/6W	CARBON	F
	R166	QRD167J-184	180K	1/6W	CARBON	B
	R166	QRD167J-274	270K	1/6W	CARBON	C
	R166	QRD167J-274	270K	1/6W	CARBON	D
	R166	QRD167J-274	270K	1/6W	CARBON	F
	R167	QRD167J-393	39K	1/6W	CARBON	B
	R167	QRD167J-473	47K	1/6W	CARBON	C
	R167	QRD167J-473	47K	1/6W	CARBON	D
	R167	QRD167J-473	47K	1/6W	CARBON	F
	R168	QRD167J-103	10K	1/6W	CARBON	
	R169	QRD167J-103	10K	1/6W	CARBON	
	R171	QRD167J-682	6.8K	1/6W	CARBON	
	R172	QRD167J-682	6.8K	1/6W	CARBON	
	R180	QRD167J-472	4.7K	1/6W	CARBON	
	R181	QRD167J-222	2.2K	1/6W	CARBON	
	R182	QRD167J-181	180	1/6W	CARBON	
	R190	QRD167J-472	4.7K	1/6W	CARBON	
	R194	QRD167J-472	4.7K	1/6W	CARBON	
	R195	QRD167J-473	47K	1/6W	CARBON	
	R196	QRD167J-103	10K	1/6W	CARBON	B
	R196	QRD167J-103	10K	1/6W	CARBON	C
	R196	QRD167J-222	2.2K	1/6W	CARBON	D
	R196	QRD167J-222	2.2K	1/6W	CARBON	F
	R197	QRD167J-222	2.2K	1/6W	CARBON	
	R198	QRD167J-332	3.3K	1/6W	CARBON	B
	R198	QRD167J-332	3.3K	1/6W	CARBON	C
	R198	QRD167J-822	8.2K	1/6W	CARBON	D
	R198	QRD167J-822	8.2K	1/6W	CARBON	F
	R199	QRD167J-472	4.7K	1/6W	CARBON	

## Resistors

Δ	ITEM	PART NUMBER	DESCRIPTION		AREA
	R118	QRD167J-332	3.3K	1/6W	CARBON
	R119	QRD167J-221	220	1/6W	CARBON
	R121	QRD167J-391	390	1/6W	CARBON
	R122	QRD167J-272	2.7K	1/6W	CARBON
	R123	QRD167J-102	1K	1/6W	CARBON
	R124	QRD167J-681	680	1/6W	CARBON
	R125	QRD167J-332	3.3K	1/6W	CARBON
	R126	QRD167J-221	220	1/6W	CARBON
	R131	QRD167J-331	330	1/6W	CARBON
	R132	QRD167J-103	10K	1/6W	CARBON
	R133	QRD167J-473	47K	2/6W	CARBON
	R134	QRD167J-103	10K	1/6W	CARBON
	R134	QRD167J-103	10K	1/6W	CARBON
	R135	QRD167J-470	47	1/6W	CARBON
	R136	QRD167J-103	10K	2/6W	CARBON
	R141	QRD167J-472	4.7K	1/6W	CARBON
	R141	QRD167J-472	4.7K	1/6W	CARBON
	R142	QRD167J-331	330	1/6W	CARBON
	R142	QRD167J-331	330	1/6W	CARBON
	R143	QRD167J-103	10K	1/6W	CARBON
	R143	QRD167J-103	10K	1/6W	CARBON
	R144	QRD167J-473	47K	1/6W	CARBON
	R144	QRD167J-473	47K	1/6W	CARBON
	R145	QRD167J-103	10K	1/6W	CARBON
	R145	QRD167J-103	10K	1/6W	CARBON
	R146	QRD167J-560	56	1/6W	CARBON
	R147	QRD167J-103	10K	1/6W	CARBON
	R148	QRD167J-103	10K	1/6W	CARBON
	R149	QRD167J-223	22K	1/6W	CARBON
	R150	QRD167J-103	10K	1/6W	CARBON

### Others

ITEM	PART NUMBER	DESCRIPTION	AREA
	E12031-201(S)	CIRCUIT BOARD	
J101	EMV7112-007	CONNECTOR	
J105	EMV7112-003	CONNECTOR	B
L106	EQL3001-102K	INDUCTOR	
L111	EQL2103-393	INDUCTOR	
L112	EQL2103-393	INDUCTOR	
T101	EQR1111-014	AM RF COIL	
T102	EQR1111-005	AM RF COIL	D
T102	EQR1111-005	AM RF COIL	F
T103	EQR1207-015	MW OSC COIL	
T104	EQR1307-009	LW OSC COIL	D
T104	EQR1307-009	LW OSC COIL	F
T105	EQT2140-017	I.F. TRANSFORMER	
T107	ECB1560-008	CERAMIC FILTER	
AT101	EMB90YV-401K	ANTENNA TERMINAL	
CF101	ECB2123-001R	CERAMIC FILTER	B
CF101	ECB2123-001R	CERAMIC FILTER	C
CF101	ECB2118-006R	CERAMIC FILTER	D
CF101	ECB2118-006R	CERAMIC FILTER	F
CF102	ECB2123-001R	CERAMIC FILTER	B
CF102	ECB2123-001R	CERAMIC FILTER	C
CF102	ECB2118-006R	CERAMIC FILTER	D
CF102	ECB2118-006R	CERAMIC FILTER	F
EP110	E70225-001	EARTH PLATE	
FE101	EAF2203-001	FRONT END	
JB103	EMV7125-005R	CONNECTOR	
JB104	EMV7125-004R	CONNECTOR	
SW202	QSS6A12-E01	SLIDE SWITCH	B
TC105	ENZ1003-006	TRIMMER	
TC106	FNZ1003-006	TRIMMER	D

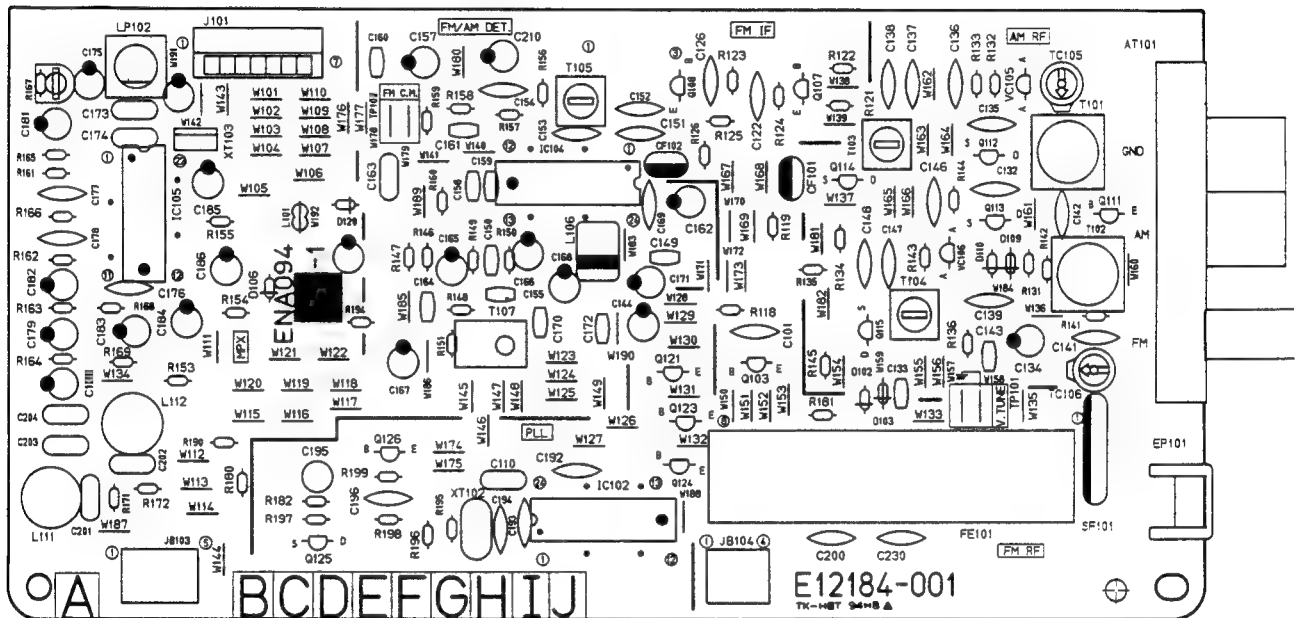
# Others

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	TC106	ENZ1003-006	TRIMMER	F
	XT102	ECX0007-200KC	RESONATOR	
	XT103	ECX0000-456KR	RESONATOR	

## ■ ENA-094 □ Tuner PC Board Ass'y

Note: ENA-094 □ varies according to the areas employed. See note (1) when placing an order.

[ Only for Switzerland (with LW) , West Germany (with LW) , Italy (with LW) ]



### Note (1)

PC Board Ass'y	Designated Areas
ENA-094 <b>A</b>	West Germany (with LW)
ENA-094 <b>B</b>	Italy (with LW)
ENA-094 <b>C</b>	Switzerland (with LW)

### I.C.s

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	IC102	LC7218	I.C. SANYO	
	IC104	LA1266A	I.C. SANYO	
	IC105	LA3401	I.C. SANYO	

### Transistors

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	Q103	2SC461(B,C)	SILICON HITACHI	
	Q107	2SC535(B,C)	SILICON HITACHI	
	Q108	2SC461(B,C)	SILICON HITACHI	
	Q111	2SD2144S(VW)	SILICON ROHM	
	Q112	2SK301(Q,R)	F.E.T. MATSUSHITA	
	Q113	2SK301(Q,R)	F.E.T. MATSUSHITA	
	Q114	2SK301(P,Q)	F.E.T. MATSUSHITA	
	Q115	2SK301(P,Q)	F.E.T. MATSUSHITA	
	Q121	DTA114YS	SILICON ROHM	
	Q123	DTA114YS	SILICON ROHM	
	Q124	DTA114YS	SILICON ROHM	
	Q125	2SK301(Q2)	F.E.T. MATSUSHITA	
	Q126	2SC458(D)	SILICON HITACHI	

### Diodes

Δ	ITEM	PART NUMBER	DESCRIPTION	AREA
	D102	1SS133	SILICON ROHM	
	D103	1SS133	SILICON ROHM	
	D106	1SS133	SILICON ROHM	
	D109	1SS133	SILICON ROHM	
	D110	1SS133	SILICON ROHM	
	D120	1SS133	SILICON ROHM	
	VC105	SVC342(L)	VARIACAP SANYO	
	VC106	SVC342(L)	VARIACAP SANYO	

## Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C101	QCF21HP-223	0.022MF 50V CERAMIC	
C110	QCZ0205-155	1.5MF 25V CERAMIC	
C122	QCF21HP-223	0.022MF 50V CERAMIC	
C126	QCF21HP-223	0.022MF 50V CERAMIC	
C132	QCS21HJ-561	560PF 50V CERAMIC	
C133	QCHB1EZ-223	0.022MF 25V CERAMIC	
C134	QETB1EM-106	10MF 25V ELECTRO	
C135	QCC21EM-223	0.022MF 25V CERAMIC	
C136	QCT26CH-180	18PF 50V CERAMIC	
C137	QCT26CH-221	220PF 50V CERAMIC	
C138	QCT26CH-241	240PF 50V CERAMIC	
C139	QCC21EM-223	0.022MF 25V CERAMIC	
C141	QCS21HJ-270	27PF 50V CERAMIC	
C142	QCY21HK-272	2700PF 50V CERAMIC	
C143	QCHB1EZ-223	0.022MF 25V CERAMIC	
C144	QETB1EM-106	10MF 25V ELECTRO	
C146	QCT26CH-680	68PF 50V CERAMIC	
C147	QCT26CH-220	22PF 50V CERAMIC	
C148	QCT26CH-121	120PF 50V CERAMIC	
C149	QCHB1EZ-223	0.022MF 25V CERAMIC	
C150	QCHB1EZ-223	0.022MF 25V CERAMIC	
C151	QCF21HP-223	0.022MF 50V CERAMIC	
C152	QCF21HP-223	0.022MF 50V CERAMIC	
C153	QCC21EM-223	0.022MF 25V CERAMIC	
C154	QCF21HP-223	0.022MF 50V CERAMIC	
C155	QCHB1EZ-223	0.022MF 25V CERAMIC	
C157	QETB1HM-474	0.47MF 50V ELECTRO	
C158	QCB81HK-101	100PF 50V CERAMIC	
C159	QCB81HK-101	100PF 50V CERAMIC	
C160	QCB81HK-221	220PF 50V CERAMIC	
C160	QCB81HK-221	220PF 50V CERAMIC	
C160	QCB81HK-101	100PF 50V CERAMIC	
C161	QCHB1EZ-223	0.022MF 25V CERAMIC	
C162	QETB1EM-106	10MF 25V ELECTRO	
C163	QCY21HK-102	1000PF 50V CERAMIC	
C164	QCHB1EZ-223	0.022MF 25V CERAMIC	
C165	QETB1HM-474	0.47MF 50V ELECTRO	
C166	QETB1HM-225	2.2MF 50V ELECTRO	
C167	QETB1HM-225	2.2MF 50V ELECTRO	
C168	QETB1HM-475	4.7MF 50V ELECTRO	
C169	QCF21HP-223	0.022MF 50V CERAMIC	
C170	QCHB1EZ-223	0.022MF 25V CERAMIC	
C171	QETB1EM-106	10MF 25V ELECTRO	
C172	QCVB1CM-103	0.01MF 16V CERAMIC	
C173	QFLC1HK-223	0.022MF 50V CERAMIC	
C174	QFLC1HK-473	0.047MF 50V CERAMIC	
C175	QETB1EM-106	10MF 25V ELECTRO	
C176	QCY21HK-102	1000PF 50V CERAMIC	
C177	QCS21HJ-391	390PF 50V CERAMIC	
C178	QCS21HJ-391	390PF 50V CERAMIC	
C179	QETB1HM-225	2.2MF 50V ELECTRO	
C180	QETB1HM-225	2.2MF 50V ELECTRO	
C181	QETB1EM-106	10MF 25V ELECTRO	
C182	QETB1HM-225	2.2MF 50V ELECTRO	
C183	QETB1HM-105	1MF 50V ELECTRO	
C184	QETB1HM-105	1MF 50V ELECTRO	
C185	QETB1HM-225	2.2MF 50V ELECTRO	
C186	QETB1HM-474	0.47MF 50V ELECTRO	
C192	QCC21EM-473	0.047MF 25V CERAMIC	
C193	QCS21HJ-180	18PF 50V CERAMIC	
C194	QCS21HJ-180	18PF 50V CERAMIC	
C195	QEN51HM-474	0.47MF 50V NON POLE	
C196	QCY21HK-102	1000PF 50V CERAMIC	
C200	QCF21HP-103	0.01MF 50V CERAMIC	
C201	QCY21HK-332	3300PF 50V CERAMIC	
C202	QCY21HK-332	3300PF 50V CERAMIC	
C203	QCY21HK-182	1800PF 50V CERAMIC	
C204	QCY21HK-182	1800PF 50V CERAMIC	
C210	QETB1CM-227	220MF 16V ELECTRO	
C230	QCF21HP-103	0.01MF 50V CERAMIC	

## Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R118	QRD167J-332	3.3K 1/6W CARBON	
R119	QRD167J-221	220 1/6W CARBON	
R121	QRD167J-391	390 1/6W CARBON	
R122	QRD167J-272	2.7K 1/6W CARBON	
R123	QRD167J-102	1K 1/6W CARBON	
R124	QRD167J-681	680 1/6W CARBON	
R125	QRD167J-332	3.3K 1/6W CARBON	
R126	QRD167J-221	220 1/6W CARBON	
R131	QRD167J-331	330 1/6W CARBON	
R132	QRD167J-103	10K 1/6W CARBON	
R133	QRD167J-473	47K 1/6W CARBON	
R134	QRD167J-103	10K 1/6W CARBON	
R135	QRD167J-470	47 1/6W CARBON	
R136	QRD167J-103	10K 1/6W CARBON	
R141	QRD167J-472	4.7K 1/6W CARBON	

## Resistors

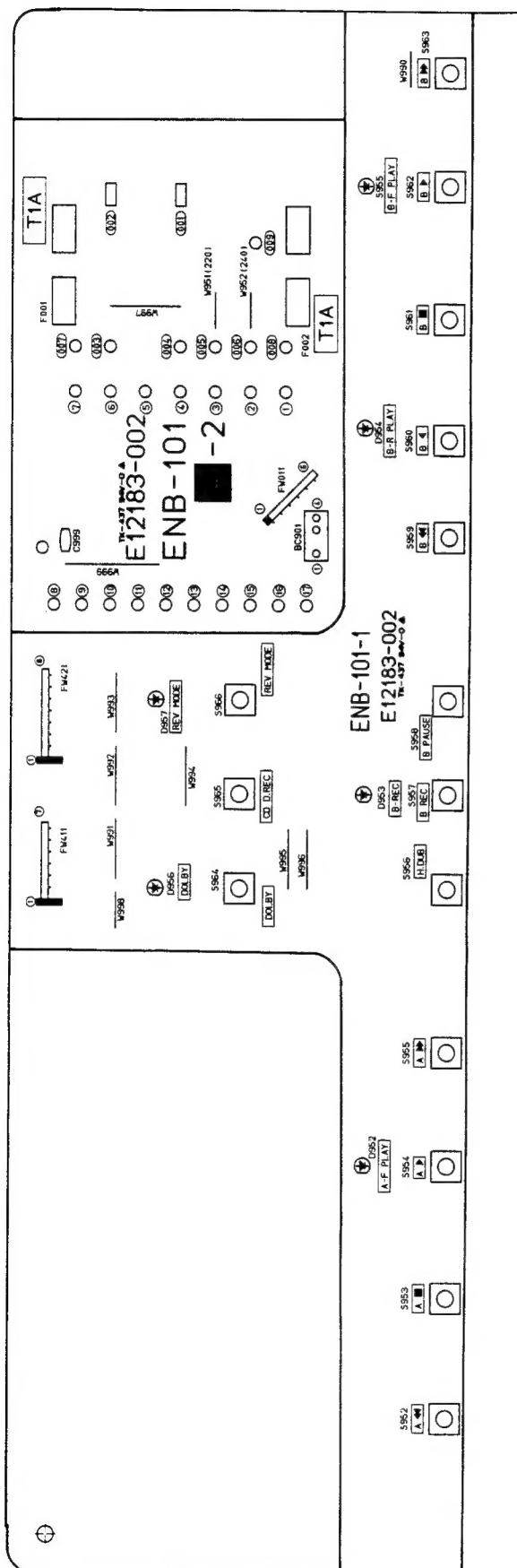
ITEM	PART NUMBER	DESCRIPTION	AREA
R142	QRD167J-331	330 1/6W CARBON	
R143	QRD167J-103	10K 1/6W CARBON	
R144	QRD167J-473	47K 1/6W CARBON	
R145	QRD167J-103	10K 1/6W CARBON	
R146	QRD167J-560	56 1/6W CARBON	
R147	QRD167J-103	10K 1/6W CARBON	
R148	QRD167J-103	10K 1/6W CARBON	
R149	QRD167J-223	22K 1/6W CARBON	
R150	QRD167J-103	10K 1/6W CARBON	
R151	QRD167J-222	2.2K 1/6W CARBON	
R153	QRD167J-103	10K 1/6W CARBON	
R154	QRD167J-103	10K 1/6W CARBON	
R155	QRD167J-562	5.6K 1/6W CARBON	
R156	QRD167J-682	6.8K 1/6W CARBON	
R157	QRD167J-103	10K 1/6W CARBON	
R158	QRD167J-273	27K 1/6W CARBON	
R159	QRD167J-561	560 1/6W CARBON	
R160	QRD167J-183	18K 1/6W CARBON	
R161	QRD167J-124	120K 1/6W CARBON	
R162	QRD167J-124	120K 1/6W CARBON	
R163	QRD167J-392	3.9K 1/6W CARBON	
R164	QRD167J-392	3.9K 1/6W CARBON	
R165	QRD167J-274	270K 1/6W CARBON	
R166	QRD167J-274	270K 1/6W CARBON	
R167	QRD167J-473	47K 1/6W CARBON	
R168	QRD167J-103	10K 1/6W CARBON	
R169	QRD167J-103	10K 1/6W CARBON	
R171	QRD167J-682	6.8K 1/6W CARBON	
R172	QRD167J-682	6.8K 1/6W CARBON	
R180	QRD167J-472	4.7K 1/6W CARBON	
R181	QRD167J-222	2.2K 1/6W CARBON	
R182	QRD167J-181	180 1/6W CARBON	
R190	QRD167J-472	4.7K 1/6W CARBON	
R194	QRD167J-472	4.7K 1/6W CARBON	
R195	QRD167J-473	47K 1/6W CARBON	
R196	QRD167J-222	2.2K 1/6W CARBON	
R197	QRD167J-222	2.2K 1/6W CARBON	
R198	QRD167J-822	8.2K 1/6W CARBON	
R199	QRD167J-472	4.7K 1/6W CARBON	

## Others

ITEM	PART NUMBER	DESCRIPTION	AREA
J101	E12184-001(S)	CIRCUIT BOARD	
L106	EMV7112-007	CONNECTOR	
L111	EQL3001-102K	INDUCTOR	
L112	EQL2103-393	INDUCTOR	
L112	EQL2103-393	INDUCTOR	
T101	EQR1111-014	AM RF COIL	
T102	EQR1111-005	AM RF COIL	
T103	EQR1207-015	MW OSC COIL	
T104	EQR1307-009	LW OSC COIL	
T105	EQT2140-017	I.F. TRANSFORMER	
T107	ECB1560-008	CERAMIC FILTER	
AT101	EMB41YV-301K	ANTENNA TERMINAL	
CF101	ECB2118-006R	CERAMIC FILTER	
CF102	ECB2118-006R	CERAMIC FILTER	
EP101	E70225-001	EARTH PLATE	
FE101	EAF2203-002	FRONT END	A
FE101	EAF2203-002	FRONT END	B
FE101	EAF2203-001	FRONT END	C
JB103	EMV7125-005R	CONNECTOR	
JB104	EMV7125-004R	CONNECTOR	
LP102	EQF0102-001	LOW PASS FILTER	A
LP102	EQF0102-001	LOW PASS FILTER	B
SF101	EQF0201-006	BAND PASS FILTER	A
SF101	EQF0201-006	BAND PASS FILTER	B
TC105	ENZ1003-006	TRIMMER	
TC106	ENZ1003-006	TRIMMER	
XT102	ECX0007-200KC	RESONATOR	
XT103	ECX0000-456KR	RESONATOR	

■ ENB-101 ☐ Cassette Switch and Power Primary PC Board Ass'y

**Note:** ENB-101 ☐ varies according to the areas employed . See note (1) when placing an order.



**Note (1)**

PC Board Ass'y	Designated Areas
ENB-101 <b>A</b>	Other Countries
ENB-101 <b>B</b>	Continental Europe (with LW) , Switzerland (with LW) , West Germany (with LW) , Italy (with LW)
ENB-101 <b>C</b> BS	the U.K.(with LW)
ENB-101 <b>D</b>	Australia

## Diodes

ITEM	PART NUMBER	DESCRIPTION	AREA
D952	SLH-34MC3F	L.E.D.	ROHM
D953	SLH-34VC3F	L.E.D.	ROHM
D954	SLH-34MC3F	L.E.D.	ROHM
D955	SLH-34MC3F	L.E.D.	ROHM
D956	SLH-34MC3F	L.E.D.	ROHM
D957	SLH-34DC3F	L.E.D.	ROHM

### Others

ITEM	PART NUMBER	DESCRIPTION	AREA
	E65508-002	TAB	
	EMG7331-001	FUSE CLIP	A
	E12183-002(S)	CIRCUIT BOARD	A
	E67132-T2R0	FUSE LABEL	A
	EMG7331-001	FUSE CLIP	B
	E12183-002(S)	CIRCUIT BOARD	B
	EMG7331-001	FUSE CLIP	CBS
	E12183-002BS(S)	CIRCUIT BOARD	CBS
	EMG7331-001	FUSE CLIP	D
	E12183-002(S)	CIRCUIT BOARD	D
S952	ESP0001-018	TACT SWITCH	
S953	ESP0001-018	TACT SWITCH	
S954	ESP0001-018	TACT SWITCH	
S955	ESP0001-018	TACT SWITCH	
S956	ESP0001-018	TACT SWITCH	
S957	ESP0001-018	TACT SWITCH	
S958	ESP0001-018	TACT SWITCH	
S959	ESP0001-018	TACT SWITCH	
S960	ESP0001-018	TACT SWITCH	
S961	ESP0001-018	TACT SWITCH	
S962	ESP0001-018	TACT SWITCH	
S963	ESP0001-018	TACT SWITCH	
S964	ESP0001-018	TACT SWITCH	
S965	ESP0001-018	TACT SWITCH	
S966	ESP0001-018	TACT SWITCH	
BC901	EWS243-015T	SOCKET WIRE	
FW011	EW368-55LST	FLAT WIRE	
FW411	EW378-20LST	FLAT WIRE	
FW421	EW388-20LST	FLAT WIRE	

## Accessories List

⚠	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1592C E30580-1595C E30580-1592CBS BT20029C BT20119	Instruction Book Instruction Book Instruction Book Warranty Card Warranty Card	1 1 1 1 1	for Australia for New Zealand	Except LGI, LBS LGI LBS A A
	BT20117 BT20060 BT20066A E43486-340A QZL1008-001	Warranty Card Warranty Card EEC Agency Safety Sheet FTZ Information Sheet	1 1 1 1 1		LG LBS LBS LBS LG
	EQB4001-015J1 EWP502-005K E67007-001 EMZ2001-011 UM-4NJ-2PSA	AM Loop Antena Built in Antena Wire Antena Adapter Battery	1 1 1 1 1		Except LG LG LEV, LGI
⚠	E04056 E35497-019 RM-SME35U RM-SR85UBATC E300196-033	Siemens Plug Caution Sheet Remote Control Battery Cover Envelope	1 1 1 1 1	220V	U U  Except LBS
	E300196-033B	Envelope	1		LBS

⚠: Safety parts

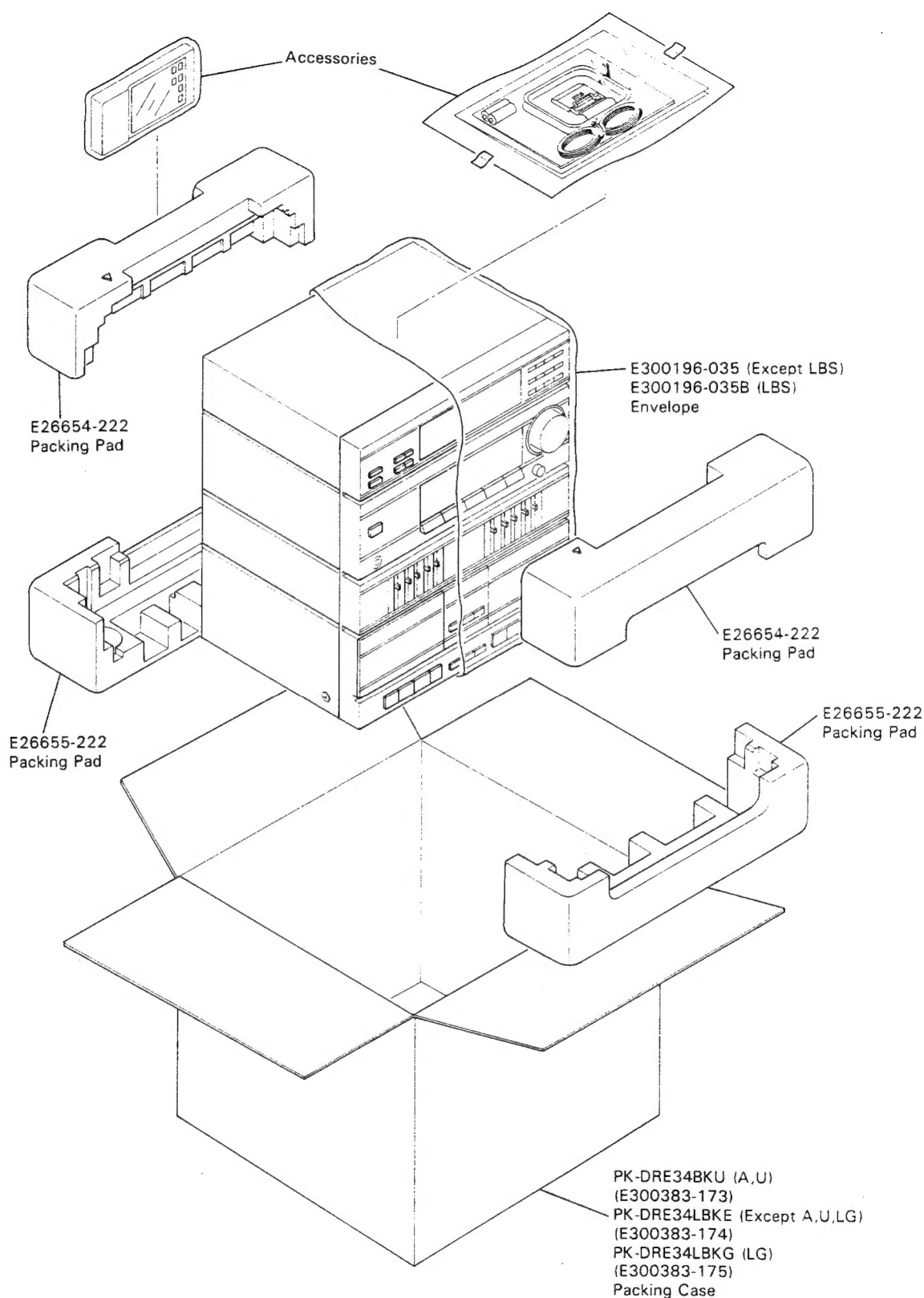
### The Marks Designated Areas

A.....Australia  
U.....Other Countries  
LG.....West Germany (with LW)  
LBS.....the U.K. (with LW)

LE, LEF.....Continental Europe  
LEV.....Switzerland (with LW)  
LGI.....Italy (with LW)  
No mark indicates all areas.



## Packing Materials and Part Numbers



### The Marks Designated Areas

A.....Australia	LE, LEF.....Continental Europe
U.....Other Countries	LEV.....Switzerland (with LW)
LG.....West Germany (with LW)	LGI.....Italy (with LW)
LBS.....the U.K. (with LW)	No mark indicates all areas.